



Macintosh™

Macintosh SE





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Operation with noncertified peripheral devices is likely to result in interference to radio and television reception.





# Macintosh™ Macintosh SE



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## Radio and television interference

The equipment described in this manual generates and uses radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple’s instructions—it may cause interference with radio and television reception.

This equipment has been tested and complies with the limits for a Class B computing device in accordance with the specifications in Subpart J, Part 15, of FCC rules. These rules are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation, especially if a “rabbit-ear” television antenna is used. (A rabbit-ear antenna is the telescoping-rod type usually found on television receivers.)

You can determine whether your computer is causing interference by turning it off. If the interference stops, it was probably caused by the computer or its peripheral devices.

If your computer system does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- ☐ Turn the television or radio antenna until the interference stops.
- ☐ Move the computer to one side or the other of the television or radio.
- ☐ Move the computer farther away from the television or radio.
- ☐ Plug the computer into an outlet that is on a different circuit than the television or radio. (That is, make certain the computer and the radio or television are on circuits controlled by different circuit breakers or fuses.)
- ☐ Consider installing a rooftop television antenna with a coaxial cable lead-in between the antenna and the television.

If necessary, consult your authorized Apple dealer or an experienced radio/television technician for additional suggestions.

You may find helpful the following booklet, prepared by the Federal Communications Commission: “How to Identify and Resolve Radio-TV Interference Problems.” This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

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### Important

This product was FCC-certified under test conditions that included use of shielded cables and connectors between system components. It is important that you use shielded cables and connectors to reduce the possibility of causing interference to radios, television sets, and other electronic devices. For Apple peripheral devices, you can obtain the proper shielded cable from your authorized Apple dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

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## Preface



# Welcome to the Macintosh SE



In 1984, Apple introduced a computer unlike anything before it—the Apple® Macintosh™ computer. Easy to learn, and really fun to use, the Macintosh revolutionized the world's perception of computers. But the innovations didn't stop there. The Macintosh has become more and more powerful: now it comes with eight times the memory capacity of the original Macintosh, it's expandable, and it uses more sophisticated system software. And with hundreds of application programs and a generous variety of optional devices to support it, the Macintosh works harder and better than ever.

This manual introduces you to the Apple Macintosh SE computer. Use the manual now to learn basic Macintosh skills, and use it later as a reference book. You don't need to know anything about the Macintosh SE or any other computer to use this manual. Everything you need to know is explained as you go along. The great thing about the Macintosh is that once you learn a few techniques, you'll use those same techniques whenever you use your Macintosh SE—no matter which application programs you're using.

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## About the manual

Here's what you'll find in this manual:

- Chapter 1, "Setting Up Your Macintosh SE," shows you how to set up the Macintosh SE system and get it ready to use.
- Chapter 2, "Learning Macintosh Basics," is a tutorial that teaches you Macintosh fundamentals, like how to use the mouse and keyboard, and how to get started with your own work, make changes to it, and save it.





- Chapter 3, “The Macintosh SE: Step by Step,” provides easy step-by-step instructions for all the functions you can perform with your computer. This chapter is arranged by function for quick access to the information you need to work efficiently.
- Chapter 4, “The Macintosh SE: Reference,” is a reference chapter that presents a detailed discussion of the Macintosh SE system.
- Chapter 5, “Expanding the Macintosh SE,” tells you how to expand the capabilities of your Macintosh SE by adding optional devices to it. It also presents some of the application programs available for the Macintosh SE.
- Chapter 6, “Caring for Your Macintosh SE,” gives you information on how to keep your computer running at peak efficiency. There’s also a guide for simple troubleshooting and for finding additional help.
- Appendix A, “The Internal Hard Disk,” helps you prepare the optional internal hard disk and gives you some tips on using it efficiently.
- Appendix B, “Macintosh SE Specifications,” provides some technical specifications for the Macintosh SE.
- Appendix C, “Macintosh Peripheral Cables,” is a guide to Macintosh peripheral device cables.

You’ll also find a glossary of Macintosh terms and an index at the end of the manual.

- ❖ *Tell Apple:* At the very end of the book, you’ll find a Tell Apple Card. After you’ve spent some time with your computer, be sure to fill out the card and send it in. We want to know what you think about Apple products and training materials.

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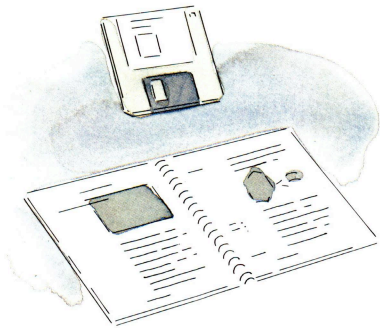
## How to use this manual

You can use this manual in a variety of ways, depending on your level of computer experience.

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### For the beginner

If you've never used a Macintosh computer before, you're in for a surprise. Learning to use the Macintosh SE may be even easier than you anticipated—and fun, too! First read Chapter 1, "Setting Up Your Macintosh SE." Once you have your system set up, go through the training disk, *Your Apple Tour of the Macintosh SE*. It's a guided tour of the Macintosh SE that helps you learn Macintosh basics with the computer as your teacher. You'll find instructions for starting the training disk in Chapter 2, "Learning Macintosh Basics."



Using the training disk is an entertaining, fun way to learn how to use your system. It has the added advantage of providing you with a controlled learning environment: if you make any mistakes, the computer lets you know and gets you back on track. The tutorial in Chapter 2 covers the same ground as the training disk, but with real software applications. Many people go through the disk *and* the tutorial. The idea is for you to learn in ways that are most comfortable for you.

After you've learned to use your system, continue on with this manual or read the manuals that came with the application programs you'll be using with your computer. Use Chapter 3 when you need to look up a particular function. Chapter 4 is for reference—it covers topics you're less likely to need to know right away. Chapter 5 explains the optional equipment and application programs available for the Macintosh SE and how to add to your system as your computer needs grow. Read Chapter 6 soon after you get your computer to learn how to care for it. If your system includes the optional internal hard disk, Appendix A will help you prepare and maintain it.

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## For the already initiated

If you've already had some experience using a Macintosh computer, you can probably skip the product training disk and the tutorial in Chapter 2. But don't skip Chapter 1, "Setting Up Your Macintosh SE." Though the Macintosh SE looks like its predecessors, you attach some devices differently. You'll find the keyboard layout a bit different, too. See "Keyboard" in Chapter 4. In general, use Chapter 3 when you need a quick reminder for performing a particular function. Read Chapter 4 for a major review of Macintosh SE features.

If you have application disks that you've used on other models of Macintosh computers, you'll probably want to update the system files on your application disks. See "Using the Installer" in Chapter 3 for instructions on updating startup disks.

Depending on what Macintosh you've used, you may be unfamiliar with the hierarchical file system. The hierarchical file system lets you organize your folders, applications, and documents in more efficient ways than was possible on older Macintosh computers. You can learn about the hierarchical file system in "Using the Hierarchical File System Within Applications" in Chapter 3 and in "The Hierarchical File System" in Chapter 4.

Your Macintosh SE works with lots of new, optional devices—an internal hard disk, a second internal 800K disk drive, a RAM expansion kit, for example—and it works in new ways with printers, file servers, and other computers on the AppleTalk® network. Read Chapter 5 for more information. If your system includes the optional internal hard disk, Appendix A will help you prepare and maintain it.

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## For the advanced user

This manual is not a technical reference manual. (You may already have noticed that.) Appendix B provides some technical information about the Macintosh SE, but if you need more, look for the Apple Technical Library—a series of official technical publications from Apple Computer, Inc., and published by Addison-Wesley Publishing Company, Inc. You'll find the Apple Technical Library in most well-stocked bookstores.

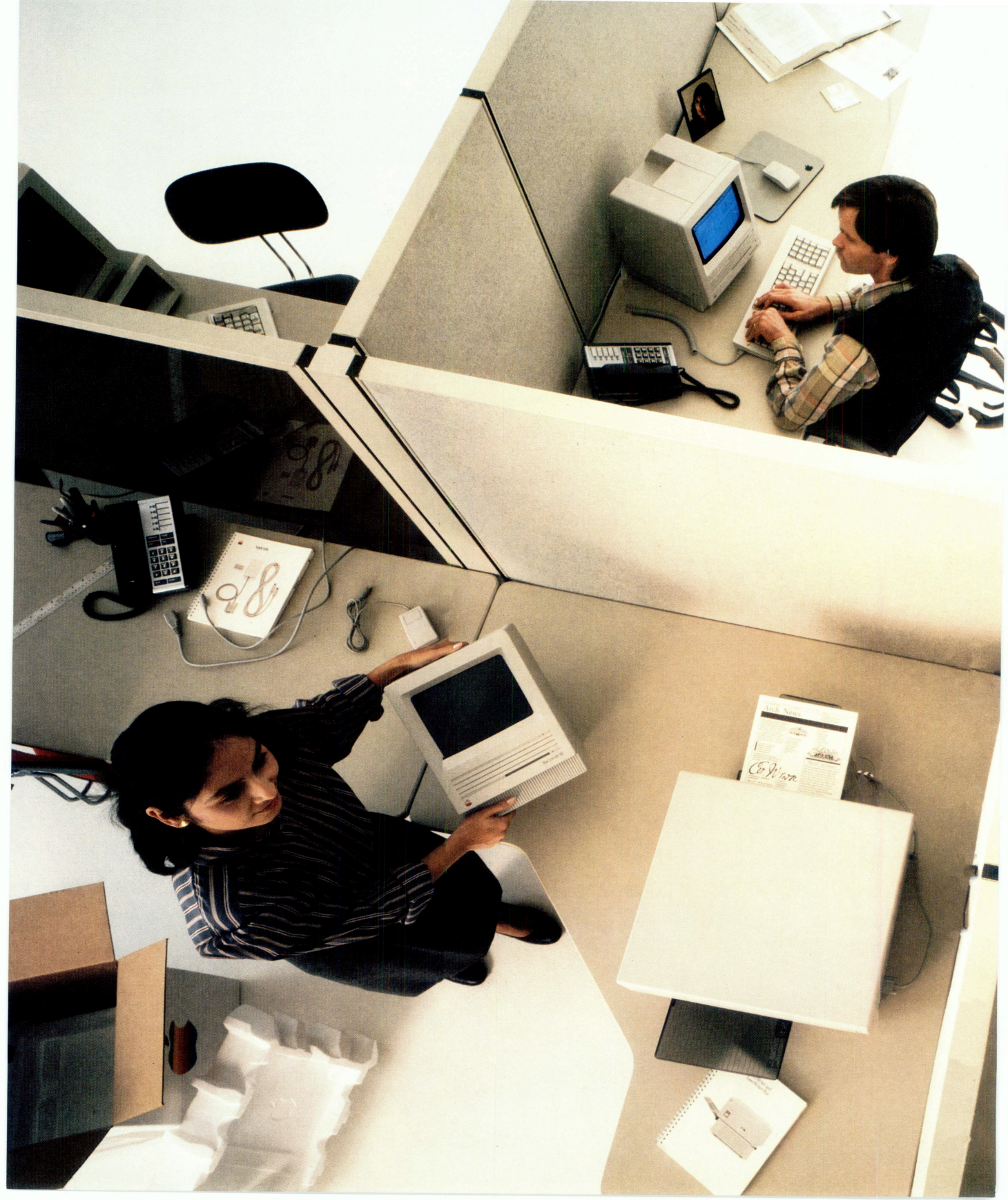
Another source of technical information about the Macintosh SE (and other Apple products) is the Apple Programmer's and Developer's Association. For more information about the association, call (206) 251-6548. You can also write to:

Apple Programmer's and Developer's Association  
290 S. W. 43rd Street  
Renton, WA 98055

If you're interested in developing applications for the Macintosh SE, ask your authorized Apple dealer about the Macintosh Programmer's Workshop—a programming environment for the Macintosh that includes an assembler and C and Pascal compilers. If you plan to develop applications for sale through retail channels, you can get valuable support from Apple Developer Relations. Write to:

Apple Developer Relations  
Mailstop 27-W  
Apple Computer, Inc.  
20525 Mariani Avenue  
Cupertino, CA 95014







# Chapter 1

## Setting Up Your Macintosh SE





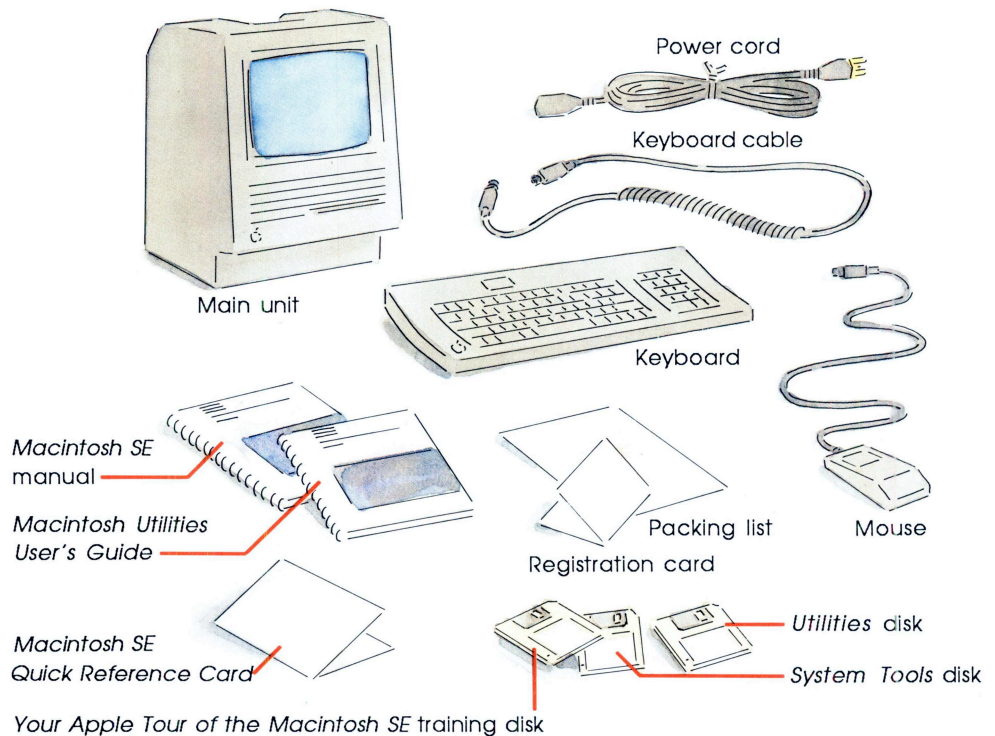
Setting up your Macintosh SE computer is easy and takes only a few minutes. If somebody has already set up your computer for you, you can skip this chapter and go right to Chapter 2; there you'll learn how to use your Macintosh SE.

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## Unpacking

The first thing to do is make sure you have everything you're supposed to. Take all the materials out of the packing boxes and see if you have everything shown here:



- ❖ *Different keyboard?* Keyboards for the Macintosh SE are packaged separately. Yours may look different from the one shown here.

If you have everything, fill out the registration card and mail it in. (The registration card asks for the computer's serial number which you'll find on the left side of the back of the main unit.) In the unlikely event that anything is missing, contact your authorized Apple dealer or representative.

Because the Macintosh SE comes with a built-in monitor and disk drive, it takes up much less space than other computers, but make sure your system is on a secure surface—no card tables or other surface that could be tipped or knocked over.

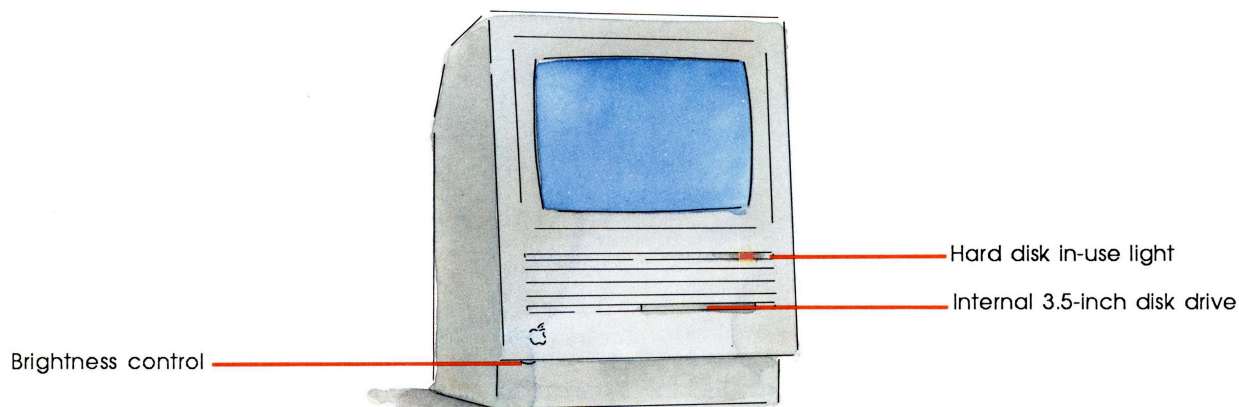
- ❖ *Save the packing materials:* Keep the boxes and all the packing material. Repack your computer system if you have to move it over long distances (that is, any distance that requires a car or airplane) to protect the system from rough handling and jarring. It's especially important to repack your computer if it has an internal hard disk.

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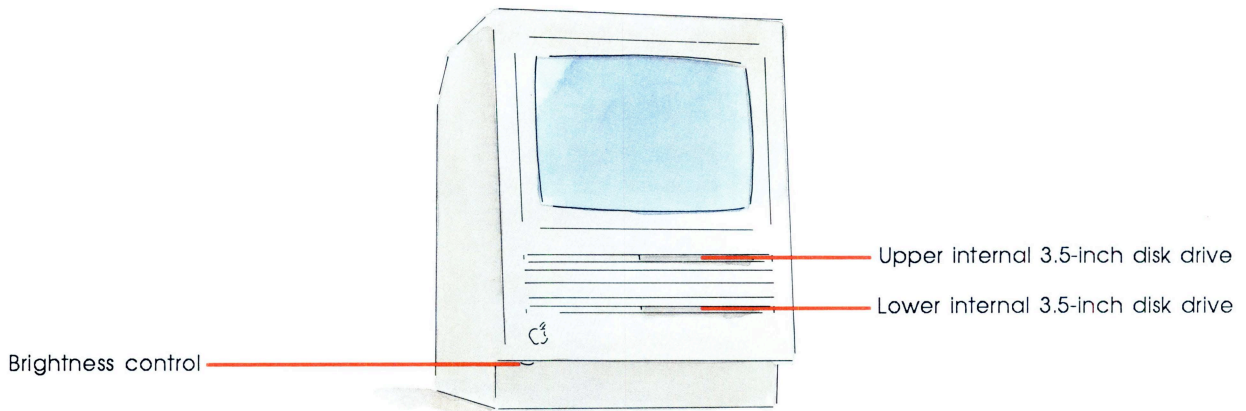
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## Taking a closer look

Now that you have your Macintosh SE out of the box, take a closer look so you're familiar with its parts.

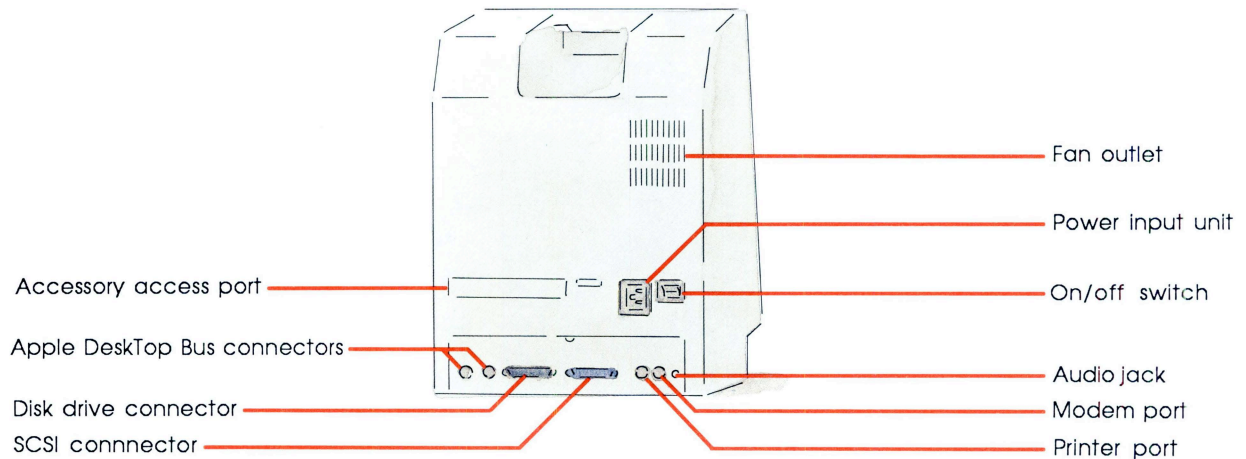


Macintosh SE with internal hard disk drive



Macintosh SE with second internal 3.5-inch disk drive

Everything you connect to the Macintosh SE attaches to connectors or **ports** on the back panel of the computer. You can usually tell which connector to use by looking at the icon above each connector. You probably won't need them all right away. You'll learn more about them in the next few sections.



❖ *Accessory access port:* Depending on the internal options installed in your system, your accessory access port may look different from the one shown here.



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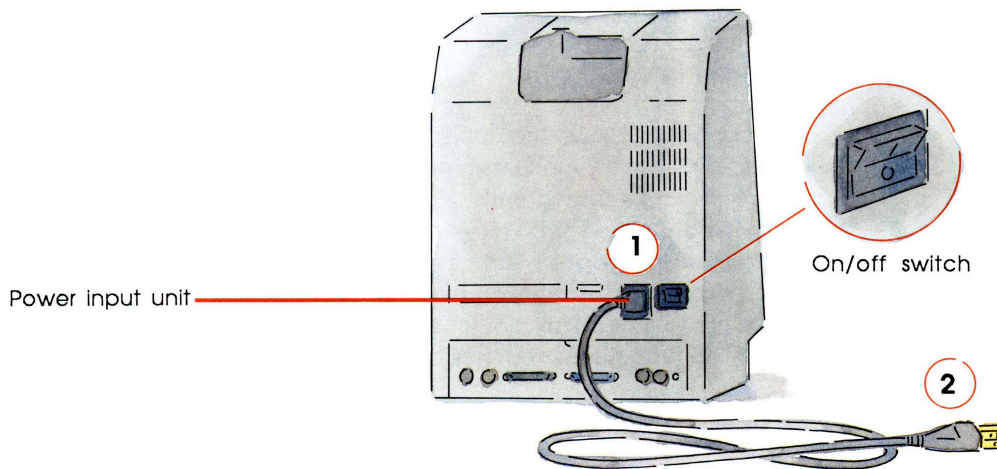
## Putting it all together

Now that you know where everything is, follow these steps to set up your system.

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### The power cord

- Plug the power cord into the power input unit on the back of the Macintosh SE. It's next to the on/off switch.

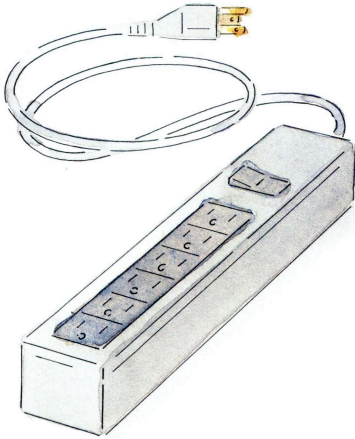


- Plug the other end of the power cord into a three-hole, grounded outlet.

**Warning**

This equipment is intended to be electrically grounded. Your Macintosh SE is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounding-type AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!

As you continue setting up your Macintosh SE system, leave the power cord plugged in, but be sure the power switch is turned *off*. When properly connected to a grounded outlet, the power cord serves as a grounding device, even when the computer is turned off.

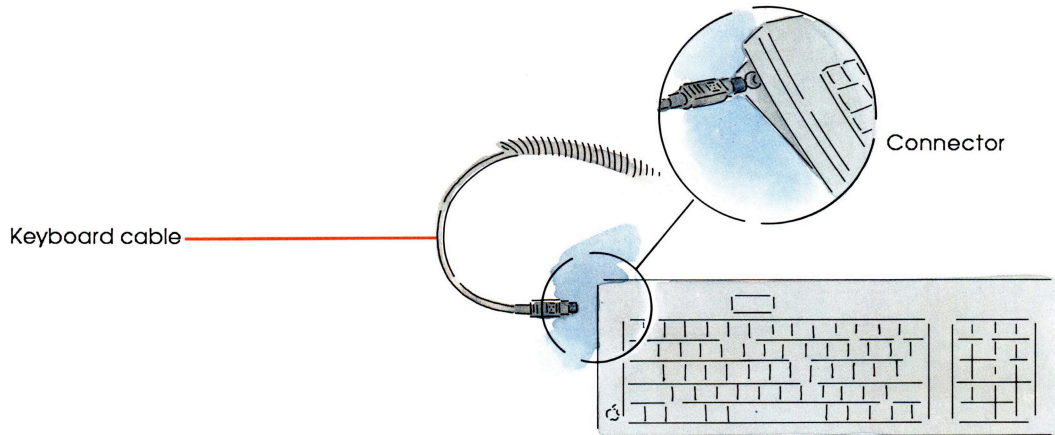


- ❖ *More power:* Many computer devices—printers, external hard disk drives, modems, and so on—need to be plugged into three-hole, grounded outlets. If you have more than two devices that need to be plugged into the wall, you should get a power strip. A power strip, available at any electronics or hardware store, is plugged into a single outlet and provides four to eight outlets. Many power strips have an on/off switch, so you can turn all your devices on and off with one switch.

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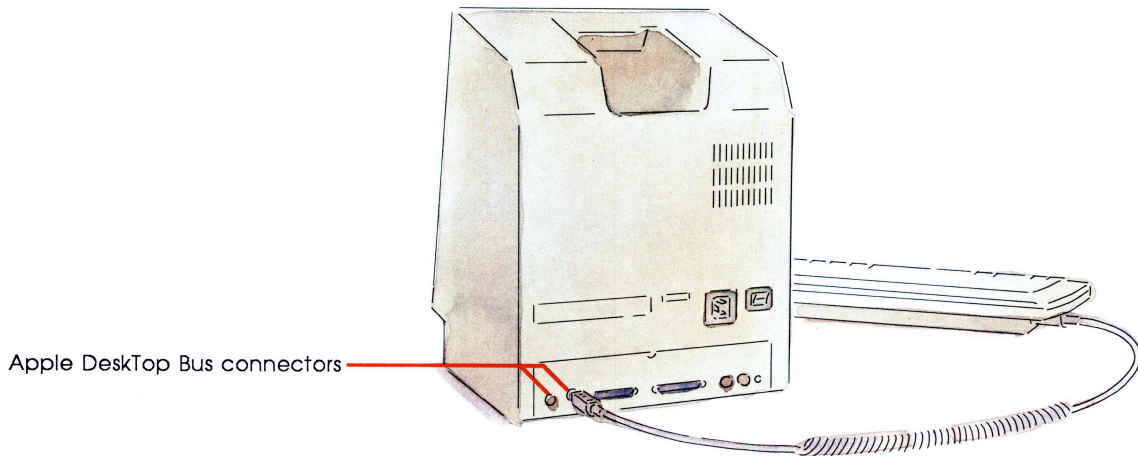
## The keyboard and mouse

- With the keyboard facing you, plug one end of the keyboard cable into the connector on the left side of the keyboard.



- ❖ *Different keyboard:* You may have purchased a keyboard other than the one shown here. Even though it looks different, you connect it to the computer the same way.

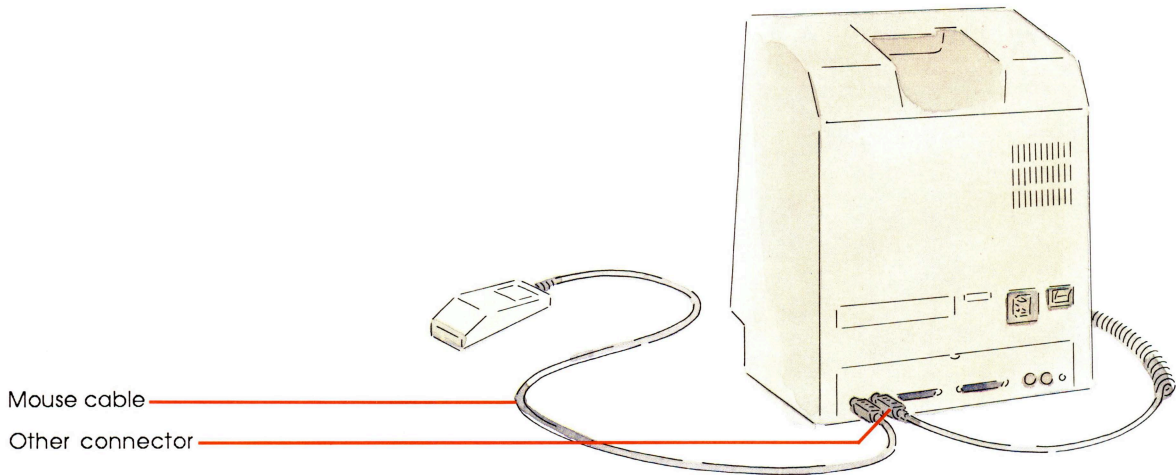
- Plug the other end of the keyboard cable into either one of the two connectors on the back of the Macintosh SE.



The official name for this set of connectors is the **Apple DeskTop Bus™**. It's called a *bus* because several different devices (the keyboard, the mouse, and other Apple DeskTop Bus devices) can send information along one "bus line" to the computer. Your Macintosh SE has two connectors (like bus stops!). You'll see how to connect other Apple DeskTop Bus devices in a minute.

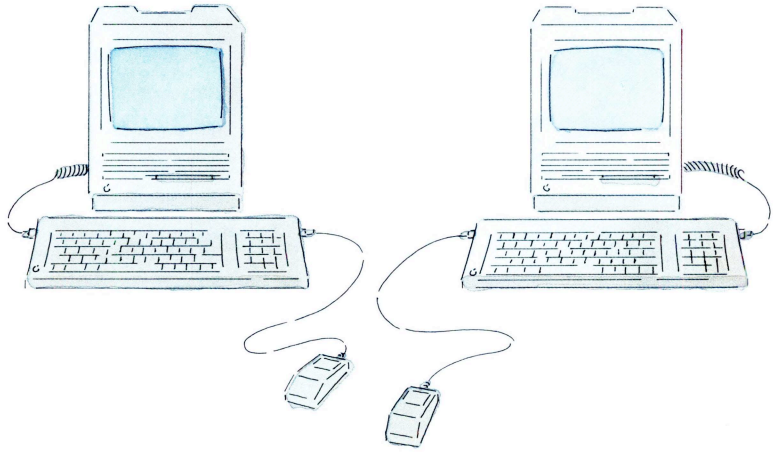


- Plug the mouse cable into the other connector on the back of the Macintosh SE.



You might prefer to **daisy-chain** the mouse to the keyboard, using the second connector on the keyboard rather than the connector on the back panel of the computer. It's up to you.

Here are two possible configurations (one's for lefties):



If you have other Apple DeskTop Bus devices to attach to your system (a graphics tablet, a joystick, or another keyboard, for example), you can either daisy-chain them to the keyboard or use one of the back panel connectors.

If you need to rearrange the devices on the Apple DeskTop Bus while using your system, turn off the computer before connecting or disconnecting any devices.

---

## Other devices

You may have purchased other computer equipment—a printer, an external disk drive, a modem. You'll find instructions for connecting them in the manuals that came with those devices.

## Important

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Some of the devices that you can attach to the Macintosh SE may be SCSI devices. (SCSI is short for *Small Computer System Interface*.) Connecting an SCSI device incorrectly can damage your system. If any of your devices are SCSI devices, read Appendix C *before* connecting them. You'll learn more about SCSI devices in Chapter 5, "Expanding Your Macintosh SE."

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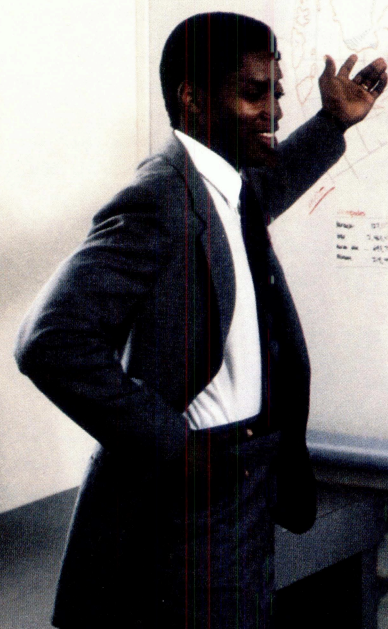
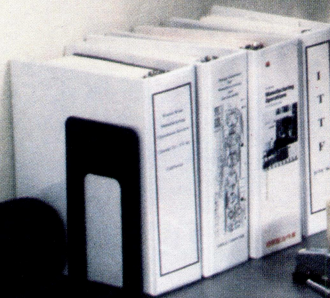
**Initializing** means preparing a disk so you can store information on it. You'll learn more about initializing disks in Chapters 3 and 4.

**System software** refers to a set of files the Macintosh SE always uses, no matter what software application you're using.

If your system includes the internal hard disk, the last step in setting up is **initializing** the hard disk and installing **system software**. For the veteran Macintosh user, that's easy, but the procedure requires some techniques that newcomers need to learn first.

If you're new to Macintosh, skip this step for now and go on to Chapter 2, "Learning Macintosh Basics." After you've mastered some Macintosh techniques, then go to Appendix A to prepare the hard disk. (It will wait for you.)

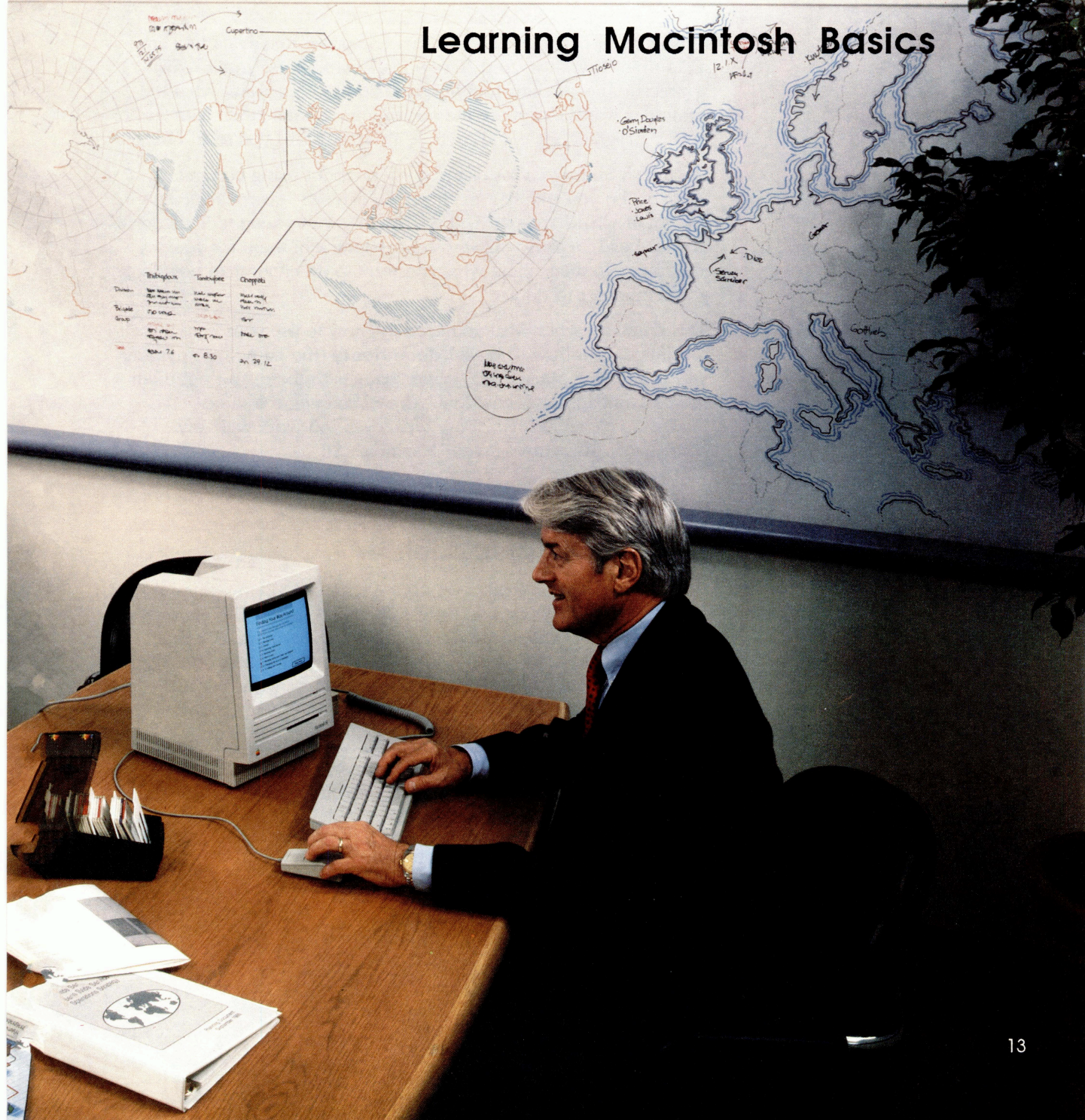






## Chapter 2

# Learning Macintosh Basics





An **application** is a software program that helps you perform your work. It's short for *application program*, and often used interchangeably with *program*.

If this is your first experience with a computer, you're starting at a great time. If you've used "traditional" computers, you'll really appreciate the Macintosh difference. No more guessing what the computer wants. No more memorizing long commands with names only a programmer could love. With Macintosh, you're in charge.

Macintosh removes a lot of the mystery about using computers. Every action you take has an effect you can see—so you're always in control of what happens. And you don't have to keep tedious details in your head, because Macintosh keeps track of them for you. You're free to think about what you want to do rather than how to get your computer to do it.

This chapter teaches what you need to know to use your Macintosh SE—how to create **documents** (the name for anything you create with Macintosh), make changes to them, and put them away. It all happens with a few basic techniques, the same Macintosh techniques you'll use whenever you work with any software **application** on your Macintosh SE.

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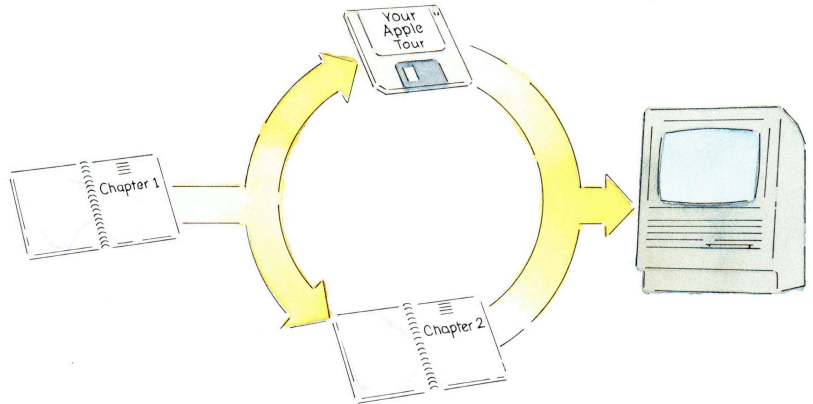
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## Training disk or tutorial

You're almost ready to start up your Macintosh SE computer and see it in action, but first you have a choice to make. The material presented in this chapter is also taught on the training disk that came with your computer—*Your Apple Tour of the Macintosh SE*. Both are designed to give you first-hand experience using the computer, but in different ways.

The training disk is an interactive guide to the Macintosh SE. That means it teaches you Macintosh concepts and techniques, prompts you step by step, and corrects you when you've made a mistake. It provides you with an entertaining, controlled learning environment.

The tutorial in this chapter uses real software applications to teach you the same techniques. Here, you're in the actual working environment that you'll use whenever you work with your Macintosh SE. Even with the actual software applications, you won't make any mistakes if you follow the directions step by step. Whether you use the disk or the tutorial is up to you. You may find it helpful to use both.



If you would like to take the guided tour, follow the steps in “The Training Disk.” If you'd rather stay with the printed page, skip now to the section, “The Tutorial.” Either way, you'll be Macintosh proficient in no time.

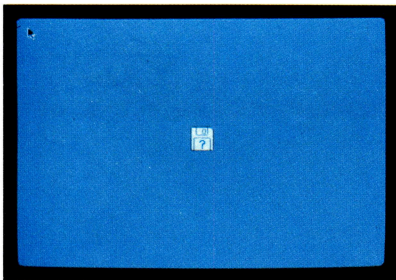
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## The training disk

Follow these steps to start up *Your Apple Tour of the Macintosh SE*:

■ **Switch the Macintosh SE on if it's not already on.**

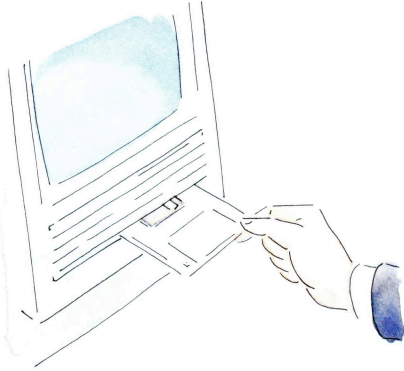


A beep lets you know it's started. If this is the first time you've turned on the power, a yellow sheet of plastic will pop out of the disk drive (or drives, if your system includes the optional second internal drive). Remove the plastic piece from the disk drive, but don't discard it; inserting it in the disk drive prevents damage during shipping if you ever need to transport your Macintosh SE.

An **icon** (a small picture) representing a Macintosh disk appears on the screen. The blinking question mark shows that the Macintosh SE is ready for you to insert a disk.

### Important

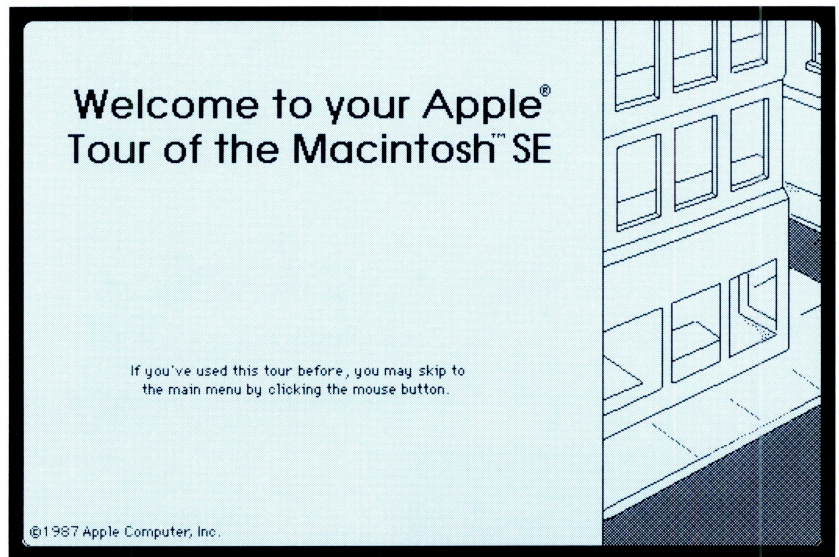
If your screen doesn't look like this, and your system includes the internal hard disk, someone may already have prepared the hard disk for you. For now, turn off the Macintosh SE, follow the next step, and then turn the computer back on again. If that doesn't work, go on to "Problems Starting Up?" later in this chapter. If none of the suggestions there works, contact your authorized Apple dealer or representative.



■ **Insert the disk labeled *Your Apple Tour of the Macintosh SE* into the disk drive, metal end first, label side up.**

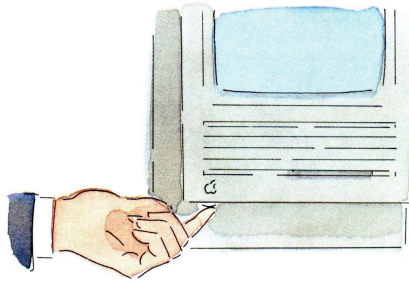
❖ *More than one disk drive:* If you have more than one disk drive, insert the training disk in the lower of the two internal drives.

When the disk is most of the way into the disk drive, the Macintosh SE automatically pulls it in, and the disk "kerchunks" into place. The soft hum is the Macintosh SE starting up the guided tour. After a few moments, you should see a display welcoming you to the training disk.





- You may need to adjust the brightness control to the level you prefer.



Use the training disk as long as you like. Anything you need to know to use the disk will be explained right on the screen.



---

## Problems starting up?

If you don't see the opening display, go through the following list to see if you can identify the problem:

- ☐ Is the computer plugged into a power source?
- ☐ If your computer is plugged into a power strip, is the power strip turned on?
- ☐ Is the computer power switch turned on?
- ☐ Is the brightness control adjusted correctly?
- ☐ Are you using the right disk? To check, hold down the Apple and Shift keys while you press the 1 key on the main keyboard. This will eject the disk. Make sure it's titled *Your Apple Tour of the Macintosh SE*.
- ☐ If you have an internal hard disk, did you switch off the Macintosh SE before inserting the training disk?

If you can't identify the problem yourself, get help from a more experienced Macintosh user or from your authorized Apple dealer or representative.

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## Stopping

When you're ready to stop using the training disk, click Let's Quit on the Main Menu. This will shut down the computer and eject the training disk.

If you want to stop using the computer for now, just switch it off. If you want to use another application, insert the application's startup disk into the disk drive and click the Restart button on the screen to start up the Macintosh SE again.

---

### Important

You may have to use the Installer on the *System Tools* disk to update the system software on your application disks before they'll work on the Macintosh SE. (It's easy!) See "Using the Installer" in Chapter 3.

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If your system includes the internal hard disk, go now to Appendix A to get your hard disk set up and running.

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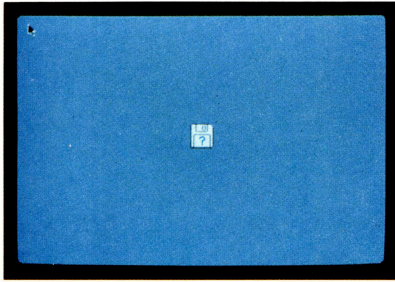
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## The tutorial

If you used the training disk, *Your Apple Tour of the Macintosh SE*, you already know how to get your system started, so the following steps will sound familiar. Just follow the steps until you get into new territory.

Follow these steps to start up the Macintosh SE:

■ **Switch the Macintosh SE on if it's not already on.**

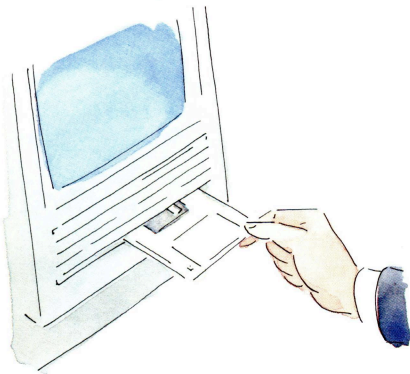


A beep lets you know it's started. If this is the first time you've turned on the power, a yellow sheet of plastic will pop out of the disk drive (or drives, if your system includes the optional second internal drive). Remove the plastic piece from the disk drive, but don't discard it; inserting it in the disk drive prevents damage during shipping if you ever need to transport your Macintosh SE.

An **icon** (a small picture) representing a Macintosh disk appears on the screen. The blinking question mark shows that the Macintosh SE is ready for you to insert a disk.

**Important**

If your screen doesn't look like this and your system includes the internal hard disk, someone may have already prepared the hard disk for you. For now, turn off the Macintosh SE, follow the next step, and then turn the computer back on again. If that doesn't work, go to "Problems Starting Up?" earlier in this chapter. If none of the suggestions there works, contact your authorized Apple dealer or representative.

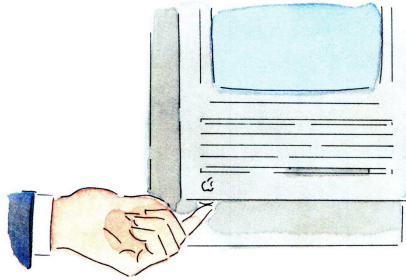


■ **Insert the disk labeled *System Tools* into the disk drive, metal end first, label side up.**

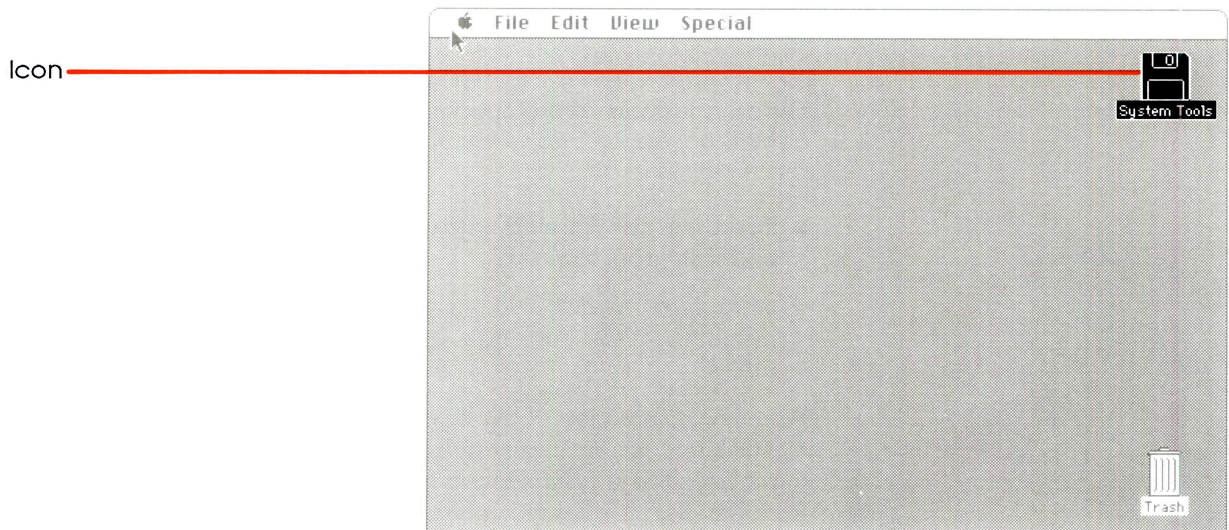
❖ *More than one disk drive:* If you have more than one disk drive, insert the *System Tools* disk in the lower of the two internal drives.

When the disk is most of the way into the disk drive, the Macintosh SE automatically pulls it in, and the disk "kerchunks" into place. The soft hum is the Macintosh SE getting information from the disk. A message appears, welcoming you to Macintosh.

- You may need to adjust the brightness control to the level you want.



A few seconds later, your screen should look like this:





This is the Macintosh **Finder**, a special application you use to organize and manage your documents and to start other applications. You use the Finder every time you start your Macintosh SE, or whenever you move from one application to another. It's like a "home base" for operating your computer.

Most computer screens look like the departing flight schedule at a busy airport, but the Macintosh SE screen looks like a light gray **desktop**. In fact, in Macintosh terminology, *desktop* and *Finder* are often used interchangeably. You can arrange your desktop any way you want—just like with a real desktop. You can slide documents around, organize your work in folders, throw things away, or get what you want to work on next—just by moving the mouse and pressing the mouse button.

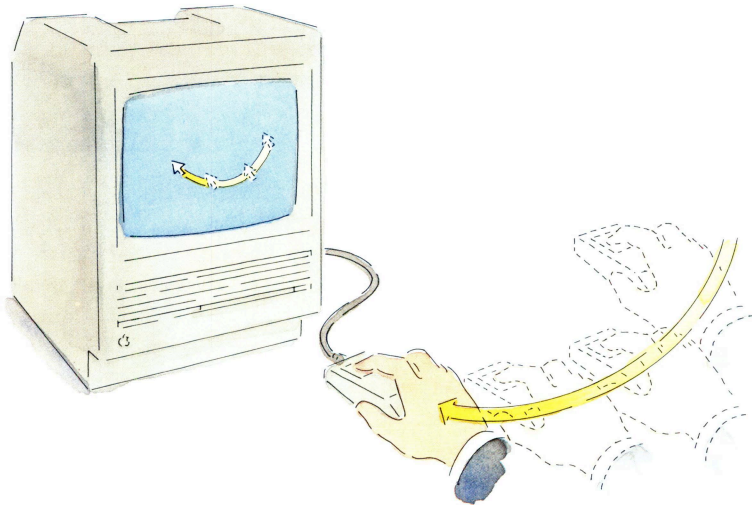
The bar at the top of the screen contains menus; you'll see how to use them a little later. The icons on your desktop always let you know what's available. Right now you see icons that represent

- the **System Tools disk** you inserted
- the **Trash**, where you can discard what you don't need anymore
- ❖ *Different screen.* If your screen doesn't look like this, someone else has probably used this lesson and arranged the desktop in a different way. After you learn in the next section how to use the mouse, see "Handling Windows" in Chapter 3 to close all windows that may have been left open. If someone has already set up the optional internal hard disk, you'll see an extra icon. For the time being, just ignore the hard disk icon as you go through the rest of this tutorial. If you have other troubles starting up, read the suggestions in "Problems Starting Up?" earlier in this chapter.

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## Mouse basics

Your Macintosh SE responds instantly to every movement you make with the **mouse**. You can start applications and get documents, work on them, and put them away again—just by moving the mouse and pressing the mouse button. The best way to see how this works is to try it.



### Moving the pointer by moving the mouse

- Watch the screen while you roll the mouse on a flat surface next to the Macintosh SE. For now, don't press the mouse button.

Every move you make with the mouse moves the **pointer** in exactly the same way. Usually the pointer is shaped like an arrow, as it is now, but it changes shape depending on what you're doing. For instance, it becomes an **I-beam** when it's positioned over text you can edit, or a **wristwatch** when the Macintosh SE is doing something that takes a little time.

You'll have the best control if you hold the mouse with the mouse cable pointing directly away from you.

If you run out of room for the mouse—if it goes off the table, for instance, or runs into the Macintosh SE itself—lift the mouse and put it down again where you have more room. Lifting the mouse doesn't move the pointer.

Using the mouse might feel a little awkward at first, but soon it will be second nature.

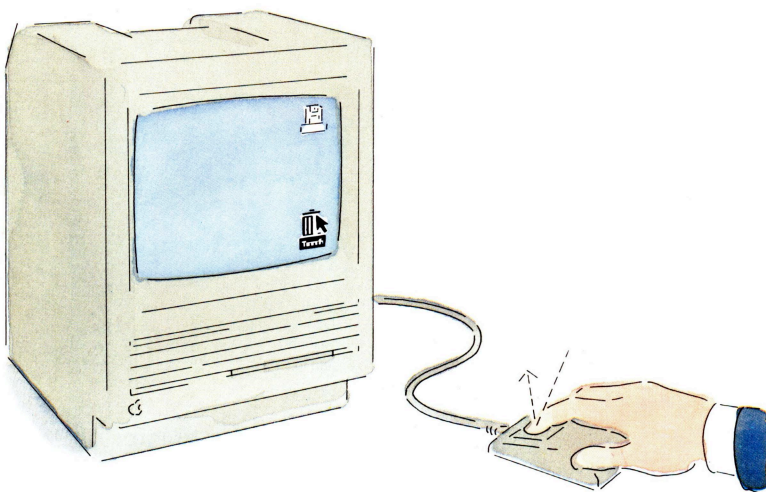
## Selecting by clicking an icon

Macintosh lets you organize your desktop any way you want, so the first thing to do with your mouse is arrange the desktop to suit you. This may not seem like a big deal now, but you'll appreciate it when your desktop gets cluttered with icons. To move an icon, you first **select** it to let your Macintosh SE know this is what you want to work on next. You select icons by using a technique called **clicking**.

- **Position the pointer on the Trash icon.**

Make sure the tip of the pointer is on the icon.

- **Click the icon by pressing and immediately releasing the mouse button.**



As you click the icon, it becomes **highlighted**. What was black is now white, and vice versa. The highlighting shows that you selected it. Notice that the System Tools icon is no longer highlighted. *Selecting* has a specific meaning in the Macintosh vocabulary: you always *select* the information you want to work on next.

- **Select the System Tools icon.**

Now the System Tools icon is selected, and the Trash icon is no longer selected.



When clicking, try not to move the mouse as you release the mouse button. Practice clicking each icon in turn until you can click without moving the mouse at all.

## Dragging an icon

Once you've selected an icon, you can use the mouse to move the icon with a technique called **dragging**.



- **Position the pointer on the Trash icon.**
- **Press and hold the mouse button while you move the mouse.**

When you press the mouse button, you select the icon. As you move the mouse, the pointer moves and drags an outline of the icon and its name along with it. So you always know where you were—and where you're going.

- **Release the mouse button.**

The icon snaps to its new place.

Try this again with the System Tools icon. Move the icon all the way to the left. Notice that it won't go off the edge of the screen, so you don't have to worry about losing it. Remember, lifting the mouse has no effect on what you're doing (but releasing the mouse button does end the current dragging).

If you change your mind, you can cancel a drag in process by moving the pointer into the menu bar at the top of the screen and releasing the mouse button. Practice dragging until you can easily put the icons wherever you want them.

You've learned how to use the mouse to point to and select information you want to work on, and you've seen how you can drag icons to arrange your desktop. Next you'll learn how to act on what you select by choosing a command from a menu.

- ❖ *Take a break:* You can take a break from this lesson at any point. Leave the Macintosh SE switched on and pick up where you left off. If the Macintosh SE has been switched off, make sure the *System Tools* disk is inserted, switch the computer back on, and pick up where you left off, backtracking if necessary to get to where you were.

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## Selecting and choosing

Whenever you work with your Macintosh SE, you tell it two things: what you want to work on and what you want to do. First, you tell the Macintosh SE what you want to work on by selecting it as you've been doing with icons on the desktop. Then you tell the Macintosh SE what you want to do with the selection. You usually do this by **choosing** a command from a menu.

Now you want to work on the *System Tools* disk. You will need to **open** its icon so you can examine its contents.

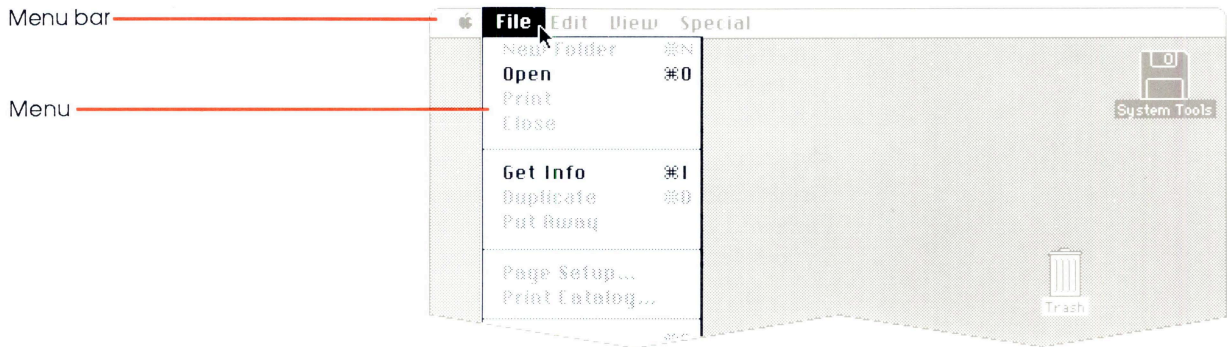
### Selecting the System Tools icon

#### ■ Select the System Tools icon.

This is the same thing you've done before. Now the System Tools icon is selected, and you can choose a command for it.

## Pulling down a menu

Along the top of the screen, in the **menu bar**, are titles of the **menus**.



### ■ Position the pointer on the word *File* in the menu bar.

Among other things, the File menu lets you open icons.

### ■ Without moving the mouse for now, press and hold the mouse button. Release it when you're finished looking.

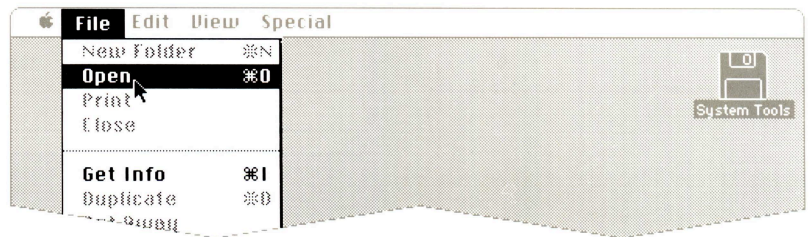
Pressing the button while you're pointing to a **menu title** causes the title to be highlighted and a menu to appear, much like a window blind being pulled down. The menu contains **commands** you can carry out on what you've selected. Commands that you can't use right now (the Print command, for instance) appear dimmed in the menu. When you release the mouse button, the menu disappears.



## Choosing a command from a menu

To choose a command from a menu, you use the same dragging technique you used to move icons.

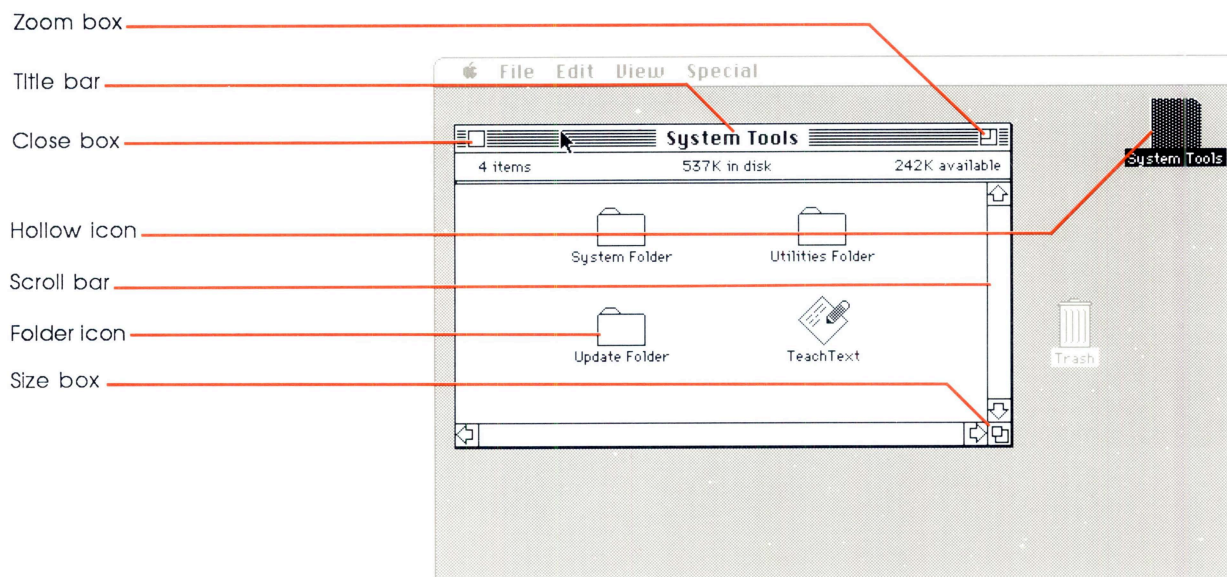
- Position the pointer again on the word *File* in the menu bar.
- This time, press the mouse button and hold it down while you drag the pointer to the word *Open*; then release the mouse button.



As you drag through a menu, each usable command is highlighted in turn. If you change your mind about choosing a command, move the pointer off the menu and release the mouse button. Nothing is chosen unless you release the mouse button while one of the commands is highlighted.

When you release the mouse button with the Open command highlighted, an outline zooms out of the System Tools icon, and the screen is almost filled by a **window**. This window displays a **directory** of icons that represent the contents of the *System Tools* disk. (If a window doesn't appear, make sure the System Tools icon is selected before you choose Open from the File menu.)

The System Tools icon is hollow now to show that the icon has been opened into a window.



The title of the System Tools window appears in the **title bar** at the top of the window. Below the title bar is information about the window's contents. Along the right and bottom are **scroll bars** that let you get around in large directories or documents. In the bottom-right corner is the **size box** you use to change the size of a window. At the top-left corner is a **close box**, and at the top-right corner is a **zoom box** that expands the window until it nearly covers the screen. In a few minutes, you'll see how to use these parts of a window to manipulate it.

To sum up what you've done so far: first you selected something (the System Tools icon), and then you chose a command (Open). You'll follow this same pattern whenever you work with your Macintosh SE: *select* some information, then *choose* an action for it.

**Utility programs** are special applications that usually change something in a system file. You'll learn more about utility programs in Chapters 3 and 4.

There are four icons in the System Tools window; they represent the **folders** and an application that are on the *System Tools* disk. One of the folders—the System Folder—holds information the Macintosh SE needs. The Utilities Folder contains special **utility programs** you'll use later, after you've used your system for a while. The **Update Folder** contains documents that give you late-breaking information about your computer or software. The fourth icon is an application called **TeachText**; it's the application you use to read the documents in the Update Folder. You'll learn more about the Update Folder and TeachText as you go through this tutorial.

❖ *Other utilities:* Your Macintosh SE comes with lots of utilities; some are included on a separate *Utilities* disk and explained in the *Macintosh Utilities User's Guide*.

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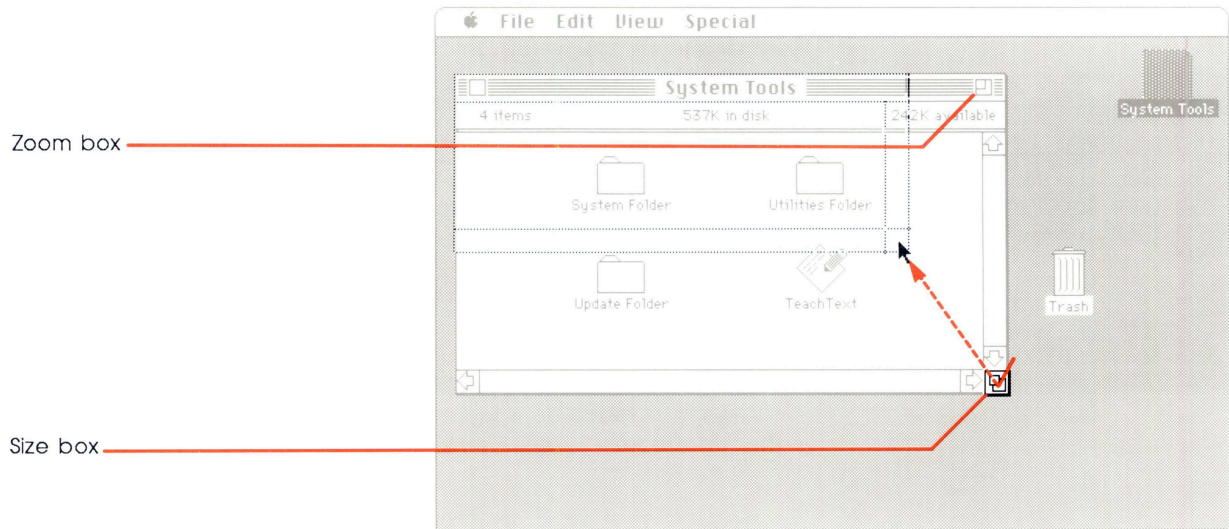
## Manipulating windows

Just as you can arrange icons on the desktop to suit you, you can also arrange windows to your liking.

### Changing the size of a window

When you're working on a document on your desktop, it's great to have a wide-open window so you can really see what's there. But small windows also have advantages. You can move small windows around on your desktop to see the contents of more than one window at a time. To change a window's size, whether it is large or small, you use the size box in the bottom-right corner of the window.





- **Position the pointer on the size box and drag it up and to the left.**

As you drag, a dotted outline follows. The farther to the left you drag, the narrower the outline becomes; the farther upward you drag, the shorter it becomes. When the outline is as small as you can make it, it stops moving. When you release the mouse button, the window changes size.

The contents of the window don't change at all when you change a window's size. The only thing that changes is how much you can see.

- **Position the pointer on the zoom box and click.**

The window zooms out to nearly fill the screen.

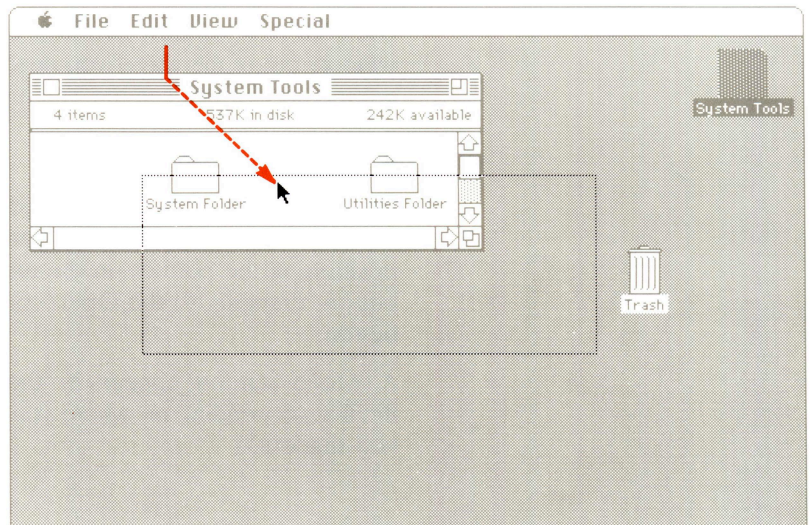
- **Click the zoom box again.**

The window returns to its former size. Using the zoom box lets you use every square inch of the screen for what you're currently working on and, with a single click, brings you back to your former view.

Experiment with controlling the size of the System Tools window. Drag the size box down and to the right to make the window bigger again. Then try all different lengths and widths. Use the zoom box and notice how the Macintosh SE always shrinks the window to the same size it was when you zoomed it out.

## Moving a window

You can move windows on your desktop just as you moved icons. To move a window, drag it by its title bar. Don't attempt to drag it with the zoom box or the close box.



- Position the pointer anywhere on the title bar of the System Tools window (except in the zoom or close boxes).
- Drag the System Tools window by pressing and holding down the mouse button while you move the mouse.

Just as when you dragged icons, a dotted outline of the window follows your movements. When you release the mouse button, the window moves to the new location.

If you release the mouse button before you have the window where you want it, just “pick the window up” again. If you change your mind about moving it, cancel the drag by moving the pointer into the menu bar and releasing the mouse button. Just as icons stayed within the limits of the desktop, so do windows. You can't lose them by dragging too far.

Practice your new skills. When you can manipulate the window easily, making it any size and putting it anywhere you want on (or partially off) the desktop, go on to the next step.

## Opening another icon

Use your new window-handling expertise to get the System Tools window out of the way if you need to. Shrink it down and move it around so you can see the Trash icon.

### ■ Open the Trash icon.

Use the same technique you used before. Select the Trash icon by clicking it, and then choose Open from the File menu by positioning the pointer on the menu title, pressing the mouse button, dragging to the Open command, and releasing the mouse button.

A second window appears on the desktop, probably overlapping the first (depending on where you left the first window and what size you made it).

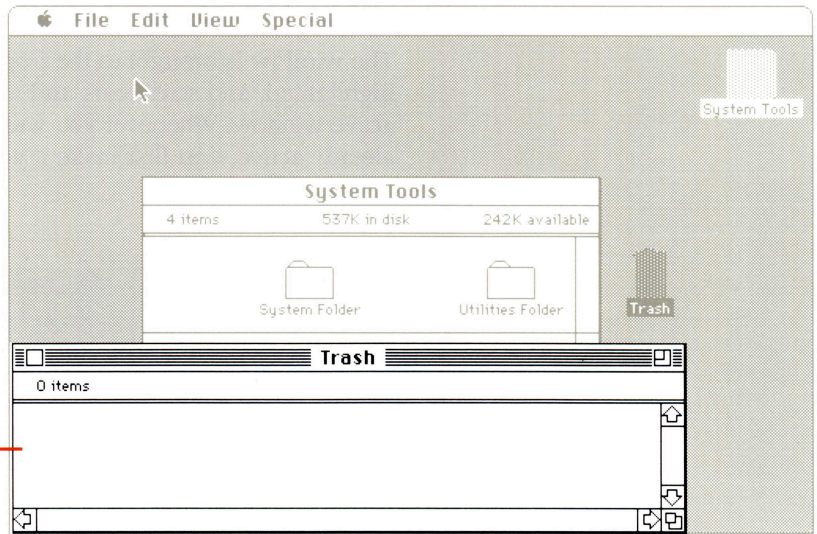
## Making a window active

With Macintosh, you can have many windows on your desktop at the same time. When there's more than one window, the Macintosh SE needs to know which one you're working on at the moment so that the commands you choose and the text you type end up in the right place. The window you're working on is always in front of all the others. It's called the **active window**, the place you want the next action to happen.

The active window's title bar is highlighted with narrow horizontal lines on either side of the title. The active window also usually has a size box in the bottom-right corner and scroll bars on the right side and on the bottom.



Active window

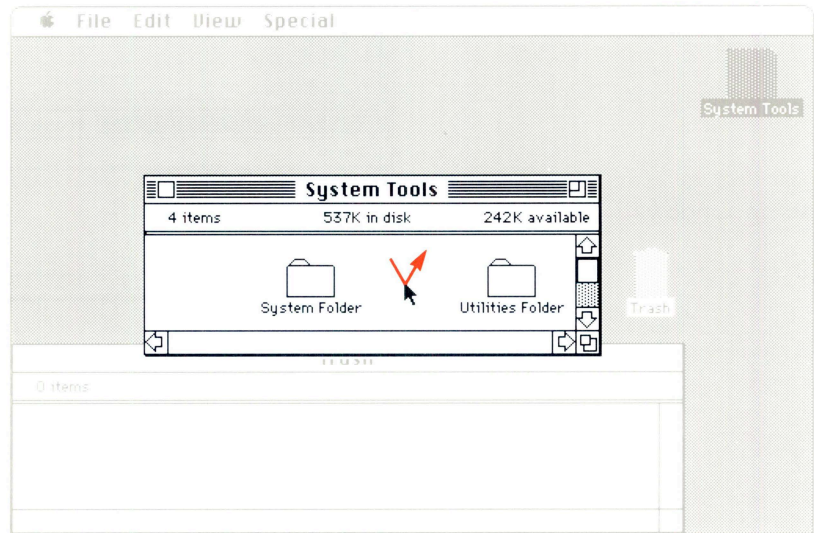


When you opened the Trash icon, it automatically became the active, frontmost window—the window you’re working in. The System Tools window is also open on the desktop, but it’s no longer the active window. To work in the System Tools window again, you make it active by clicking anywhere inside it.

If you left the System Tools window small before you opened the Trash window, it may be completely hidden by the Trash window now. You know how to move windows and change their size, so if you can’t see the System Tools window, move the Trash window or change its size until you can see the System Tools window again. It doesn’t have to be completely visible. As long as you can see part of it, you can make it active.

■ **Click in the System Tools window.**

The window is brought to the front of the desktop. Its title bar is highlighted, and scroll bars and a size box appear to show it's the active window. Whenever you want to work in a window that isn't already active, you first make it active by clicking anywhere inside it.



Your desktop might not look exactly like the one here. Your Macintosh SE does exactly what you tell it to do; the size and position of your windows are up to you.

■ **Click in the Trash window.**

Now it moves in front of the System Tools window again.

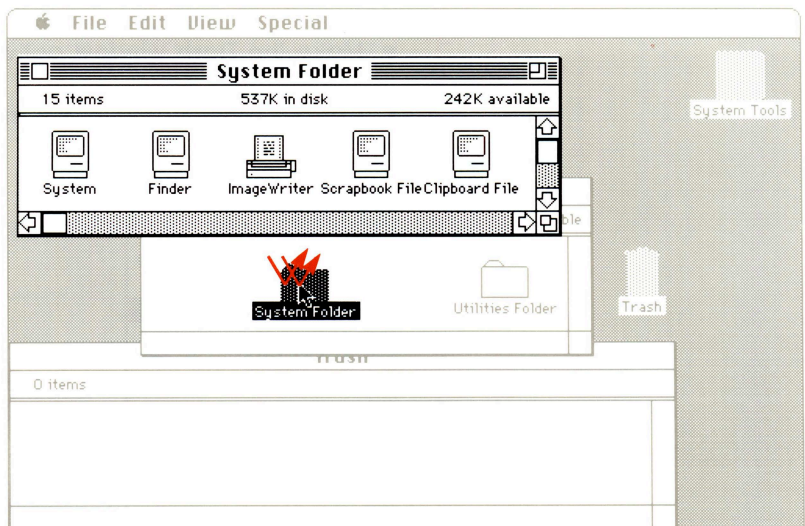
Experiment with arranging your desktop—making each window active in turn, changing its size, and moving it.

❖ *Hint:* Sometimes you need to move a window in order to see its size box. And you sometimes need to change a window's size or move it to see a window it's covering.

## Opening other icons

You can open icons in a **directory window**, such as the System Tools window, just as you opened icons on the desktop. You know how to open an icon by selecting it and choosing Open from the File menu. There's a shortcut: you can do the same thing with a technique called **double clicking**. Try it to open the System Folder in the System Tools window. (If necessary, first make the Trash window smaller; then make the System Tools window active and large enough that the System Folder icon is visible.)

- **Position the pointer on the System Folder and quickly press and release the mouse button twice.**



Inside the System Folder are icons that represent system files; they contain information the Macintosh SE needs.

If the System Folder window doesn't appear when you double click, shorten the interval between your clicks. That way the Macintosh SE will be able to interpret your actions as a double click, and not just as insistent single clicks. Now you have two ways to open icons.



See “Initializing the Hard Disk” in Appendix A and “Using the Installer” in Chapter 3 for more information on how to use these utility programs.

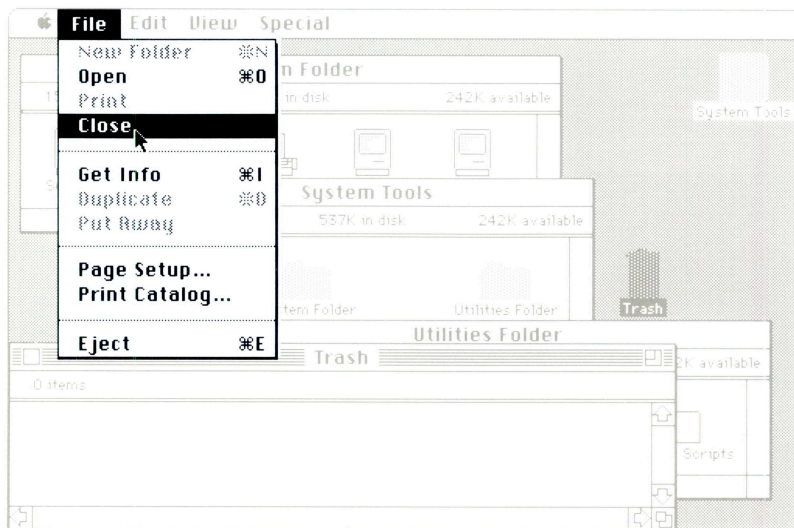
- **Open the Utilities Folder, either by double-clicking it or by selecting it and choosing Open from the File menu.**

If necessary, first move the System Folder window. The Utilities Folder contains icons that represent utility programs—system tools you’ll use later to set up your internal hard disk (if your system includes that option) and to install printers and Macintosh SE system software on other disks.

## Closing a window

You can have many windows on your desktop, but to keep things tidy, you might want to close some when you’re finished working on them, and open them again when you need them.

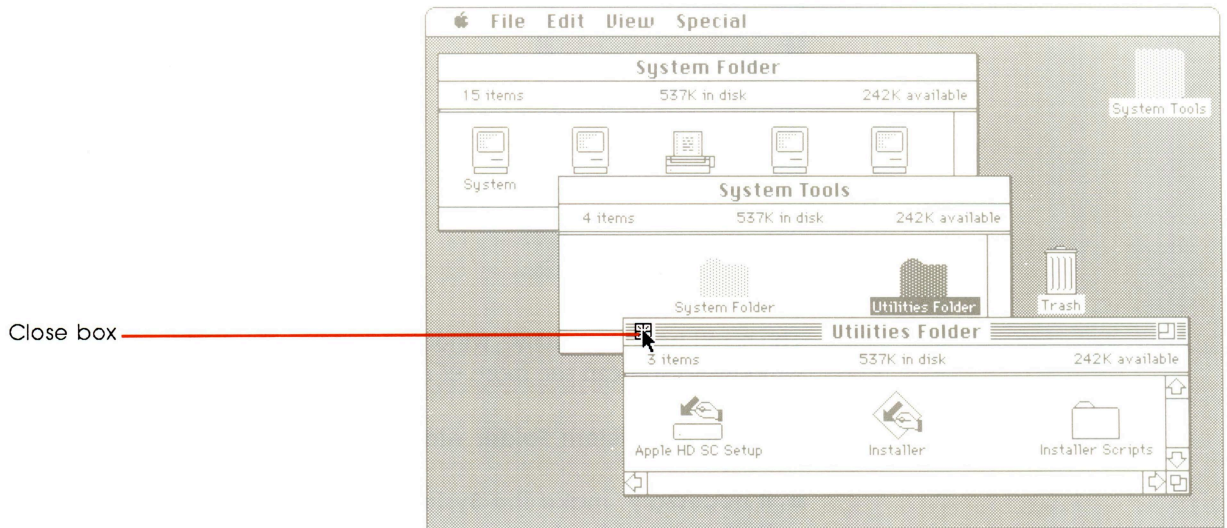
- **Make the Trash window active by clicking in it.**
- **Choose Close from the File menu.**



The window collapses back to an icon. Whenever you choose Close from the File menu, the frontmost, active window is closed, and the window behind it becomes active.

Now close the Utilities Folder window by using another shortcut. The close box in the title bar lets you close an active window with a single click.

- **Make the Utilities Folder window active if it's not already.**
- **Click the close box.**



It's the same as choosing Close from the File menu.

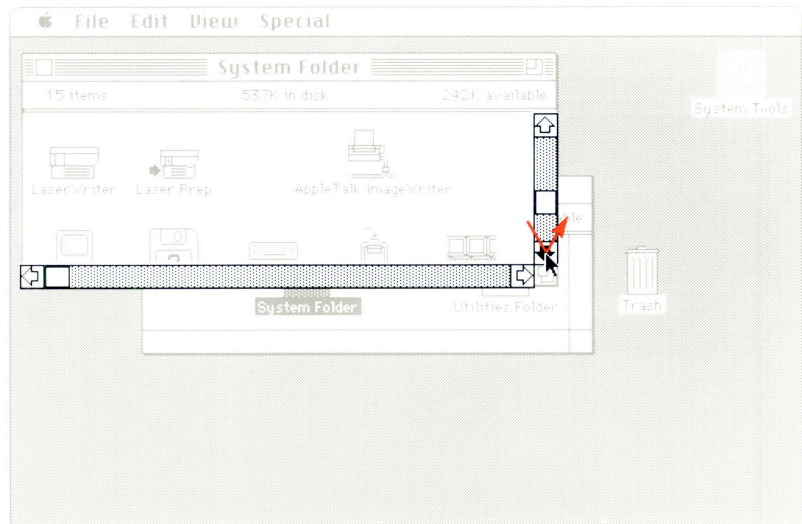
### Using the scroll bars to see more

Windows on the desktop often can't show you the entire directory or document all at once, even when you've made the window very large. There's often more information than can fit in the window at one time.



The scroll bars in an active window let you move what's in the window so you can see more of it.

- **Open the System Folder window if it's not already open.**
- **If necessary, make the System Folder window small enough that some of the icons are hidden from view.**

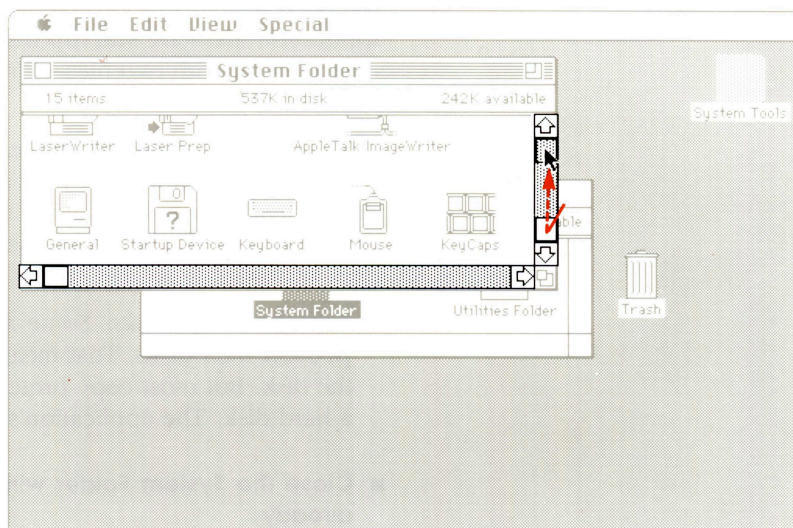




- Click the scroll arrow that points down.

More icons come into view. You can also scroll up, right, or left. It is also possible to scroll by dragging the box in the scroll bar.

- Drag the box in the vertical scroll bar to the top of the scroll bar and release the mouse button.



If you want to know more about scroll bars, see "Scrolling" in Chapter 3.

Nothing in the window moves until you release the mouse button.

---

## Using applications

You might be wondering what all of this has to do with your work—the documents you'll create with Macintosh applications. You'll use the skills you just learned in nearly all applications. You usually select information and choose commands in consistent ways. And windows are always opened and closed, changed in size, moved, and made active by using the same techniques you just learned.

In addition to helping you manage your documents—copying them, renaming them, removing them, for example—the Finder lets you start applications and get documents, and then put your documents away when you're finished working on them.

## Starting an application

In this section you'll learn how to start up an application and use that application to create a new document.

Most of the applications you'll use with the Macintosh SE come on their own disks. The sample application you'll use in the next few sections—TeachText—is already on the *System Tools* disk, the disk you used to start this tutorial. Like the *System Tools* disk, most application disks are **startup disks**. That means they include a system folder with two files—Finder and System—that the computer needs to start itself.

Usually you just insert the application disk into the disk drive and switch on the computer. If your system includes a hard disk, you can make it a startup disk and copy the application onto the hard disk. That way, you won't have to insert a disk to start up the computer. (See Appendix A for the details *after* you finish this tutorial.)

❖ *Copy protected disks:* Some application manufacturers **copy protect** their disks. That means you can't make another copy of the disk. But most copy-protected applications can be used with a hard disk. The application's manual should explain how.

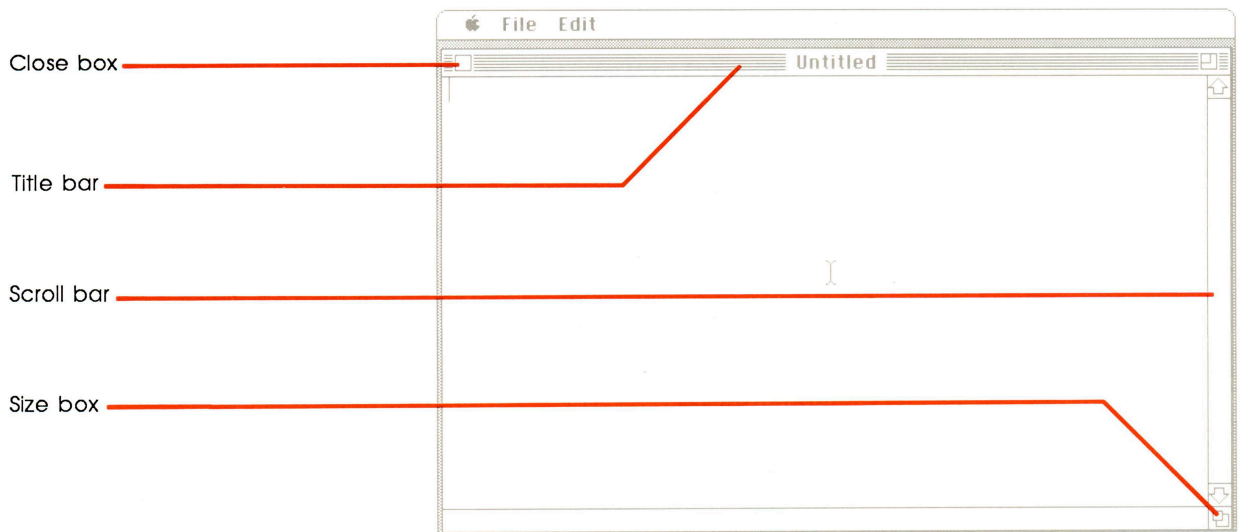
■ **Close the System Folder window if you haven't done so already.**

■ **Make the System Tools window larger, if necessary, to see the TeachText icon.**

Use the technique you learned earlier for changing the size of a window.

■ **Open the TeachText icon, either by double-clicking it or by selecting it and choosing Open from the File menu.**

You see the TeachText screen—an empty window ready for you to type in some text.



For now, you'll use TeachText as a sample application to learn how to use applications. You'll learn about other ways to use TeachText later in this tutorial.

Like most applications, TeachText has its own menus, a title bar, a close box, a size box, and a scroll bar. Also like most applications, TeachText always opens with an "Untitled" window. You create whatever you want with the application and then name the document when you save it.

### Creating a new document

Now that you've started TeachText, you need to use the keyboard to create a new document. The Macintosh SE keyboard is used mainly for typing text and numbers. The main part of the Macintosh SE keyboard is very similar to a typewriter keyboard. Use the Shift key for capital letters. On the screen, a blinking vertical bar marks the **insertion point**, where text you type will be inserted. If you make a mistake, use the **Delete key** to erase characters back to where the mistake is, and then start typing again. You don't have to use the **Return key** to start a new line. The application starts new lines for you.



■ Use the keyboard to type this sample paragraph:

The following is my best guess for a production schedule. Please keep in mind that it is subject to change once reality gets underway. Let me know if I'm cheating anyone of the time he or she needs, or if I'm not allowing for black holes.

Most applications that let you enter and edit text—like word processing applications—start the new lines for you. It's a feature called **word wraparound**, so called because if a word is too long to fit at the end of a line, the word wraps around to the next one automatically.

You'll have a chance later to learn more about adding and editing text, but now you need to give the document a name and save it on the disk.

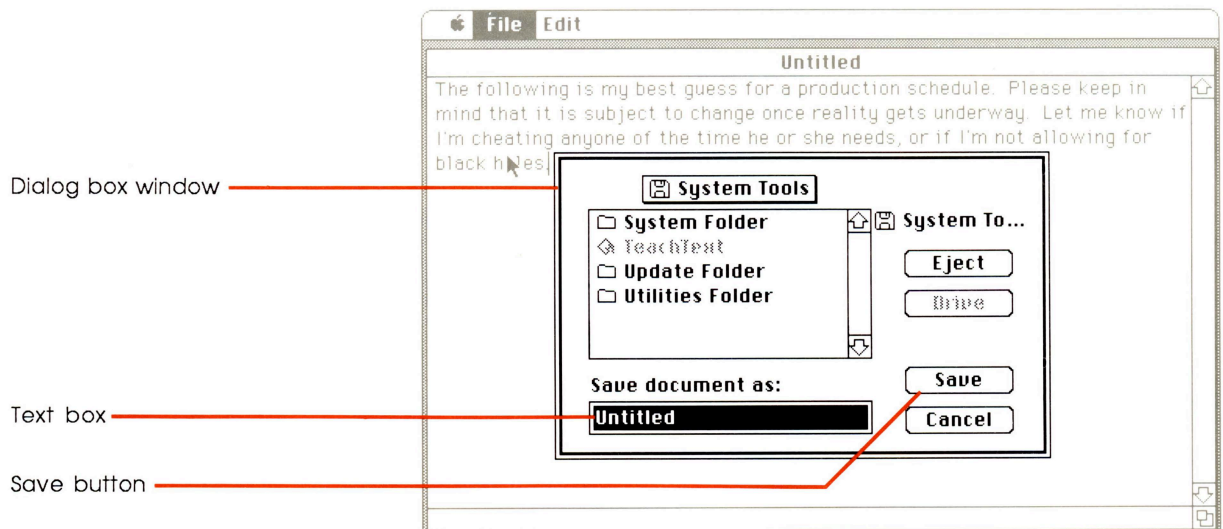
## Saving your work on a disk

■ Choose Save from the File menu.

A **dialog box** appears. Whenever your Macintosh SE needs more information from you, it presents a dialog box with buttons to click, such as OK or Cancel, and sometimes with a place for you to type additional information. Dialog boxes can also alert you if you're about to do something that could cause you to lose information; they give you a chance to cancel what you were about to do. When the messages are alerting you, they're often accompanied by a beep.

The dialog box that appears now gives you the chance to save your document on any disk. For now, you'll save your document directly on the *System Tools* disk, without placing it inside a folder. (For now, just ignore the information in the dialog box window.)

There's a **text box** in which to type the name of your document.



### ■ Type First Memo

### ■ Click the Save button.

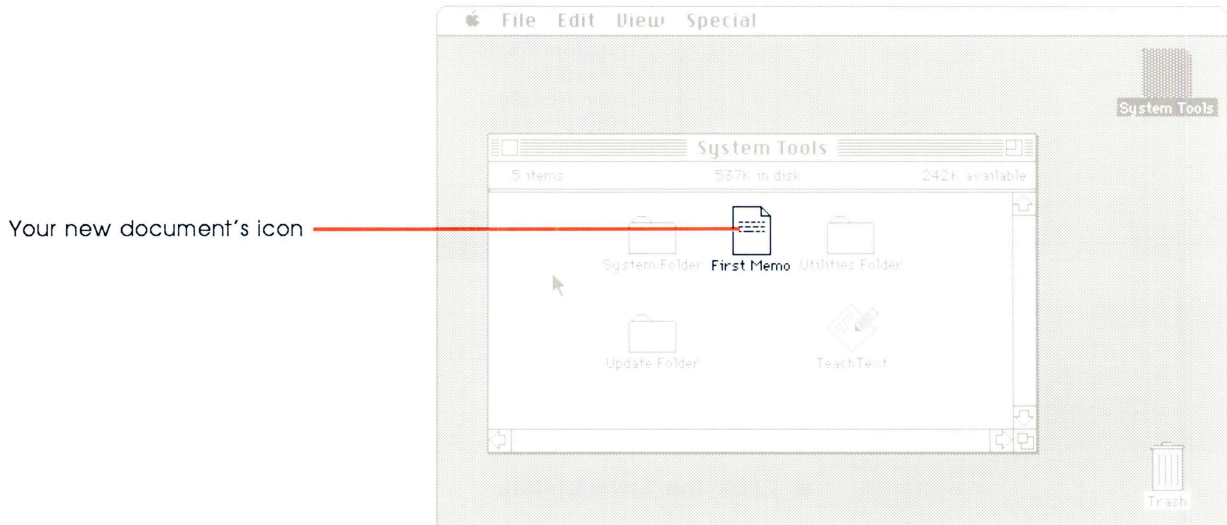
Your document is saved on the disk just as it appears on the screen. After the Macintosh SE saves the document, it returns you to the document window. Now the title bar shows the name you just gave to the document.

This memo is only a sample document. When you're working with other applications, however once you've given your document a name, and if you continue working on it, make a habit of choosing the Save command from the File menu about every 15 minutes or so. (It's a good thing to do while you're waiting for your next inspiration.) That way, if your Macintosh SE gets switched off or there's a power failure, you'll never lose more than 15 minutes' worth of work.

With your work saved on the disk, you can quit TeachText and return to the Finder.

### ■ Choose Quit from the File menu.

The desktop appears again. But now the icon of your new document appears in the System Tools window.



This new icon represents the document you created, and below it is the name you gave it. All documents you create have an icon particular to the application you used to create them, so you can tell which application you used to create each of your documents. When you work on this document again, you'll select and open the icon just like any other icon.

### Editing text

Now you know how to create and save a document. In this section, you'll use your first Macintosh memo to learn how to make changes to what you've just written.

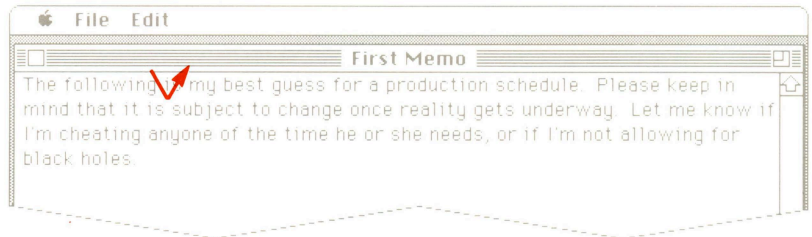


### ■ Open the First Memo icon.

Opening the document you want to work on also starts the application you need to do the work. You don't have to open the application before opening the document; once a document has been saved, you can open it directly from the Finder.

The TeachText application starts, and the document you saved earlier reappears, just as it was when you saved it.

### ■ Select a new insertion point by clicking in front of the *s* in the word *subject*.



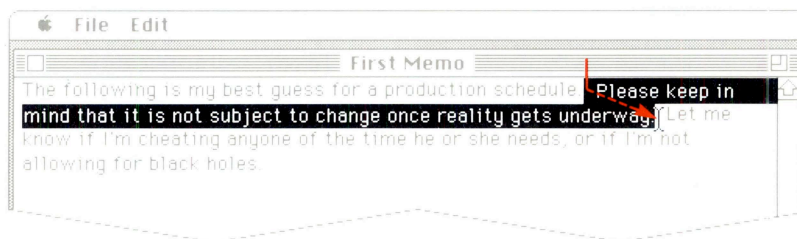
You're moving the insertion point to where you want to add text.

### ■ Type *not*

What you type appears at the insertion point. (Don't forget to add a space after *not*.) You probably noticed that when you added text, the words on the other lines rewrapped to accommodate the extra word.

Now you'll select some text and move it to another part of the document.

- **Select the entire second sentence by positioning the pointer after the period that follows the word *schedule* and dragging to the end of the sentence.**



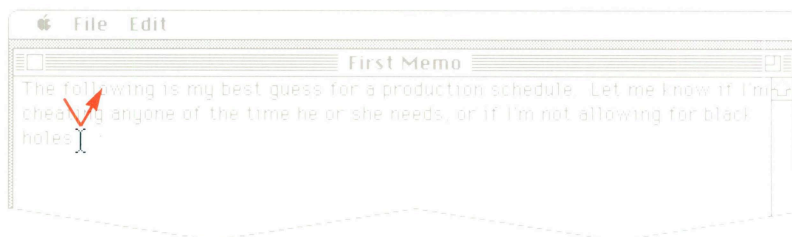
First drag down, and then drag to the right. (Be sure you include the period at the end of the sentence.) If you move the pointer off the sentence, you might select more than just the sentence. If this happens, start dragging over again; nothing unexpected can happen while you're selecting text.

When you drag through text, you're selecting information to work on, as you did when you selected icons. You selected icons by clicking them; you select text by dragging across or down through lines of text.

- **Choose Cut from the Edit menu.**

The sentence vanishes. Whenever you choose Cut or Copy from the Edit menu, whatever you cut or copy is put in a holding place called the **Clipboard**, ready for you to paste it to a different location if you want. (You use Copy when you want to leave the selected text where it is and put a copy of it somewhere else. Copy works just like Cut, except it leaves the text you selected in the document.)

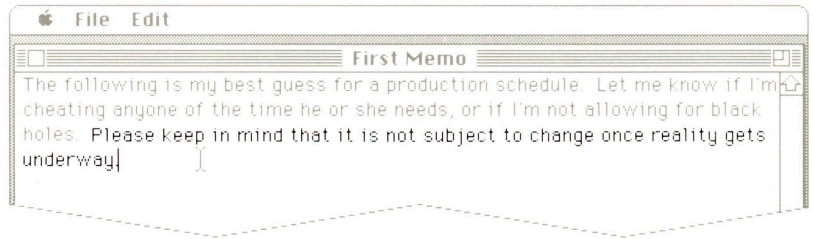
- **Select a new insertion point by clicking after the period that follows the word *holes*.**



See “Editing Text” in Chapter 3 for a summary of how to enter and edit text.

#### ■ Choose Paste from the Edit menu.

The contents of the Clipboard—in this case, the sentence you just cut—are pasted into the location you selected.



The contents stay on the Clipboard until you choose Cut or Copy again, so you can continue to paste them. You can paste within one document or between two documents created with the same application. The contents also stay on the Clipboard when you leave an application, so you can cut and paste between applications.

For example, you can draw a picture with MacPaint™ and use it to jazz up a report you create with MacWrite™. Or borrow a passage from a MacWrite document and paste it into an overhead slide you're preparing with MacDraw™.

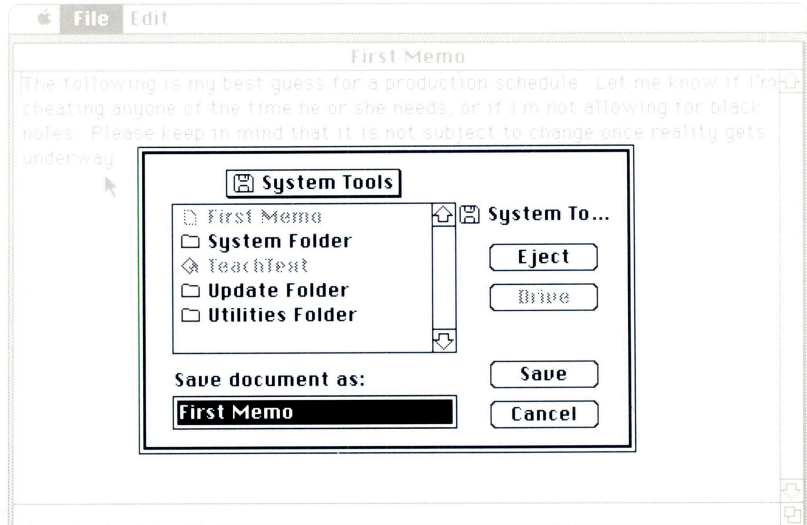
### **Saving a document with a different name**

Now that you've edited your original memo, you need to save your revision. When you're finished making changes to a document, you have two choices for saving. You can choose Save from the File menu, and the revised document is saved with the same name you gave the original. That's fine if you don't want to keep a separate copy of the original document. But you may want to save the revision and keep the original, too. (For example, you may have a form letter that you keep as an original; you can personalize the letter and save different versions with new names.) For that you choose the Save As command from the File menu.



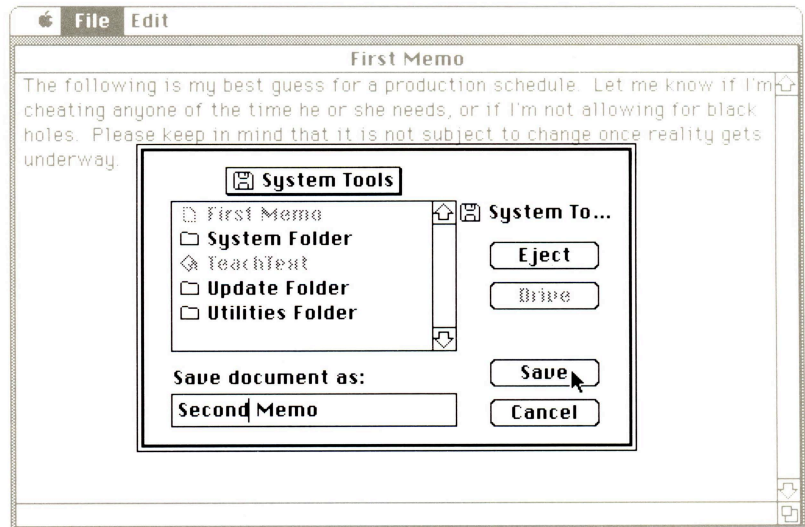
- **Choose Save As from the File menu.**

A dialog box appears. (It's the same one you saw when you named your first memo.) The name of the original document appears highlighted in the text box.



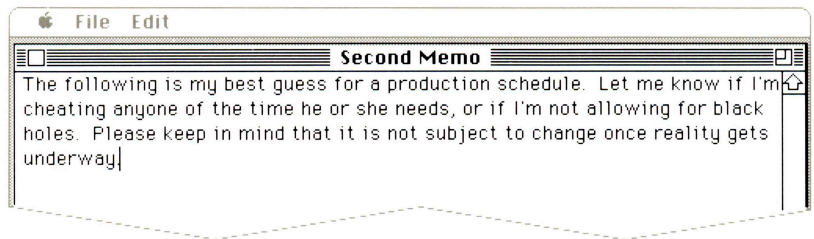
You can edit the names of documents just as you would other text. (If you want, you can just type a new name for the document rather than edit the old one.)

- **Position the pointer at the beginning of the word *First* and drag to the end of the word to select it.**
- **Type   Second**



■ **Click the Save button.**

You've saved the revised memo with a new name, and you return to the document you just renamed. Notice that the title bar changes again to show the name you just gave the revised memo. Your original document is still saved, unaltered, with its own name.



■ **Choose Quit from the File menu.**

You return to the desktop where you see an icon for the revised memo with the name you just gave it.

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## Organizing documents

You've seen how to use the Finder to start an application and open a document, save it, and quit the application to return to the Finder. The Finder also helps you organize your documents—group them together with related documents, duplicate them, rename them, or throw them away.

### Using folders

You'll soon accumulate many documents on the disks you'll be using. At some point you might want to arrange your desktop so that related documents are grouped together. Macintosh folders work just like ordinary file folders to help you organize your documents. For instance, you could keep all your monthly status reports together in one folder. Or group all your MacPaint illustrations together, or keep each one with the report it illustrates. Macintosh lets you organize your documents however you want them.

You've already got three folders on the *System Tools* disk. To organize your own work, you have an endless supply of empty folders.

■ **Start a new folder by choosing New Folder from the File menu.**

A folder named *Empty Folder* appears in the System Tools window.





The empty folder is automatically selected when you create it, so you can rename it just by typing. (If you can't see the entire icon, you can make the window larger or move the icon.)

If you already have a folder named *Empty Folder* on the desktop, the folder you create is named *Copy of Empty Folder*.

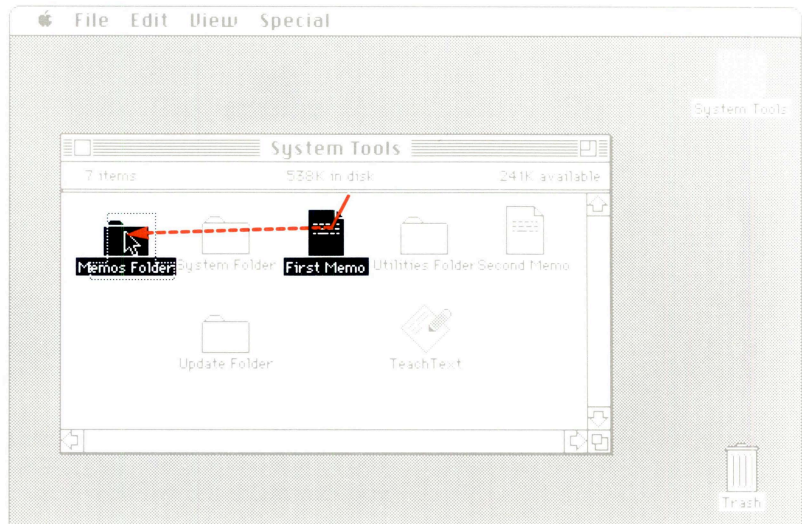
■ **Type Memos Folder and press Return.**

Pressing Return confirms your new folder name. *Empty Folder* is renamed *Memos Folder*.

Usually you have to click icons you want to rename. This prevents renaming highlighted icons when you don't really want to. But you don't have to click newly created folders to rename them.

You can also select, cut, and paste the icon names, just as you would other text. Usually, however, when you want to rename an icon, it's easier just to select the icon and replace the old name by typing a new one.

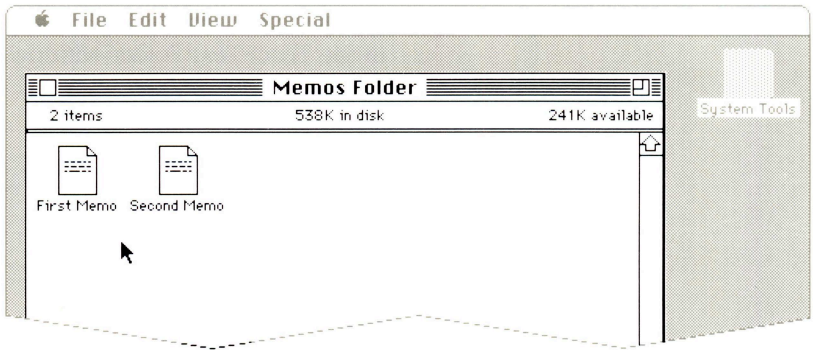
- Drag each of the two document icons to the Memos Folder icon, releasing the mouse button when the Memos Folder icon is highlighted.



When you cover the folder icon with the outline of each document icon, the folder icon is highlighted. When you “drop” the document icons into the folder by releasing the mouse button, the folder icon is no longer highlighted, and your document icons disappear into the folder.

- **Open the Memos Folder icon.**

There are the icons that represent your two documents.



When you drag a document icon to a folder, you file the document there. You can also drag an icon into an open folder window; the result is the same.

### Nesting folders

Large-capacity disks—especially hard disks—can hold hundreds of documents and folders. At some point, you may find it helpful to place folders *within* other folders to keep your work organized.

- **Close the Memos Folder window if it's not already closed.**
- **Choose New Folder from the File menu.**

You see an empty folder in the System Tools window.

- **Name the new folder by typing TeachText Folder and then pressing Return.**

Depending on the length of the names you give your documents and folders, names may occasionally overlap and obscure each other. To read the name, you can select the icon or drag it to a different position in the window.

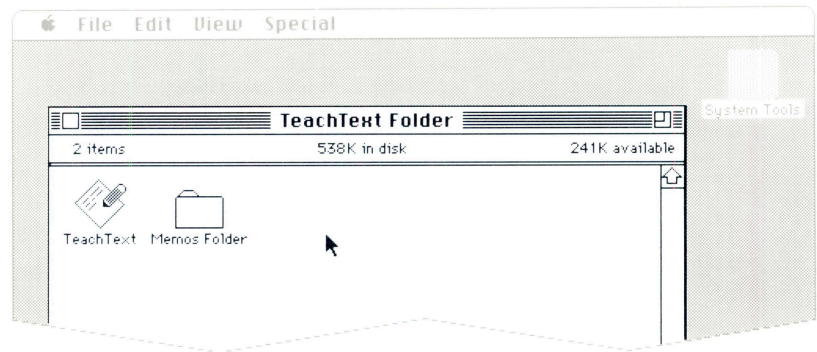
- **Put the Memos Folder icon and the TeachText icon into the TeachText Folder.**

Use the technique you just learned for placing documents in folders.

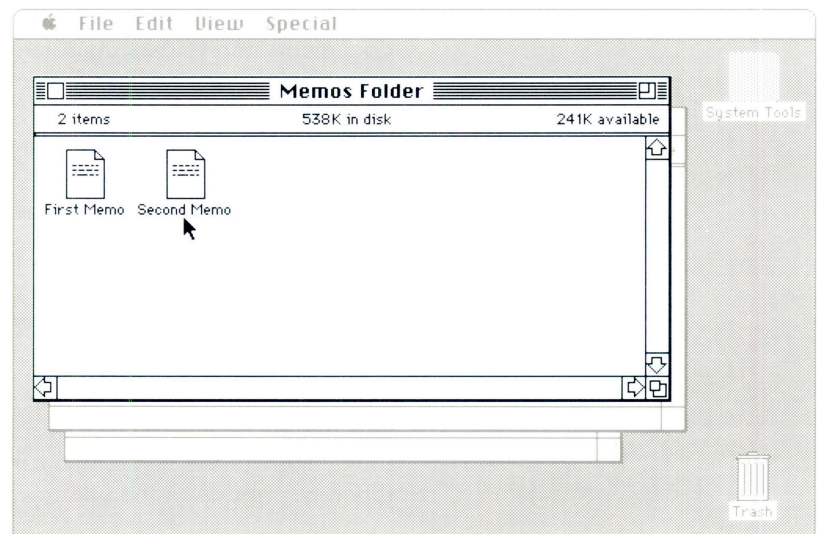
- **Open the TeachText Folder.**



You see both the TeachText application icon and the Memos Folder in the TeachText Folder window.



■ **Open the Memos Folder.**



Notice that each folder has its own window. The active window is the folder you just opened. (But you can still change the active window by clicking anywhere in another window.)

### ■ Close the Memos Folder and then the TeachText Folder.

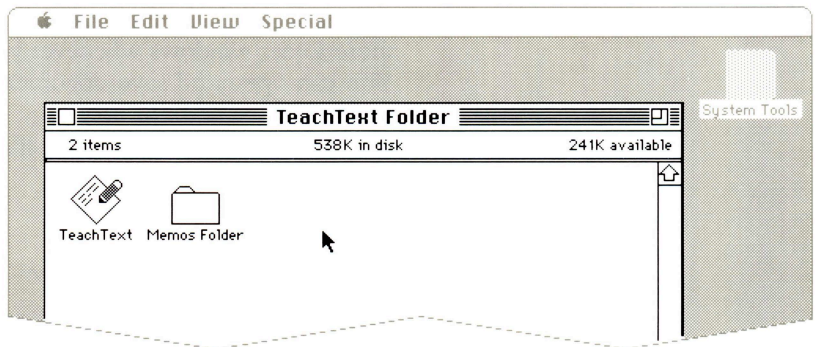
As you close each folder's window, it collapses back into its icon in the previous window, until you reach the System Tools window.

Placing folders within folders is called **nesting**. You can continue nesting folders as deep as you want, but most people find that retrieving more than four levels of documents and applications is tedious. Fortunately, you won't misplace them; you can find any application, document, or folder by using Find File, a desk accessory designed to help you keep track of the contents of large-capacity disks. (See "Using Find File" in Chapter 3 and "Find File" in Chapter 4.)

When you nest folders, you create a hierarchy. When all of the folders on a disk are closed, and the disk's directory window is open, you're looking at the top level of the hierarchy. When you open a folder on the top level, its directory window shows you the second level of the hierarchy.

### ■ Open the TeachText Folder.

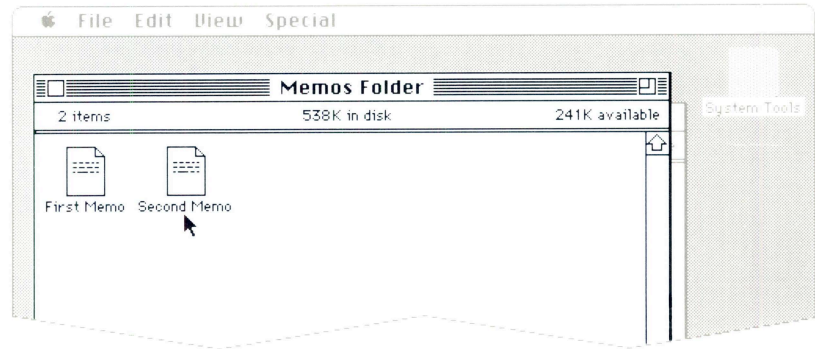
You see the second level.



If there's a folder in that second level—in this case, the Memos Folder—when you open it, you see the third level, and so on.

- **Open the Memos Folder.**

You see the third level of the hierarchy—the two memos.



The feature that lets you nest folders is called the **hierarchical file system**. (It's sometimes abbreviated *HFS*.)

### **Working in the hierarchical file system**

When you're working with an application, you don't have to quit the application and use the Finder to go back and forth through all those folder windows whenever you want to open a new document. You can open and save documents within an application.

- **Close the Memos Folder if it's not already closed.**

- **Open the TeachText icon.**

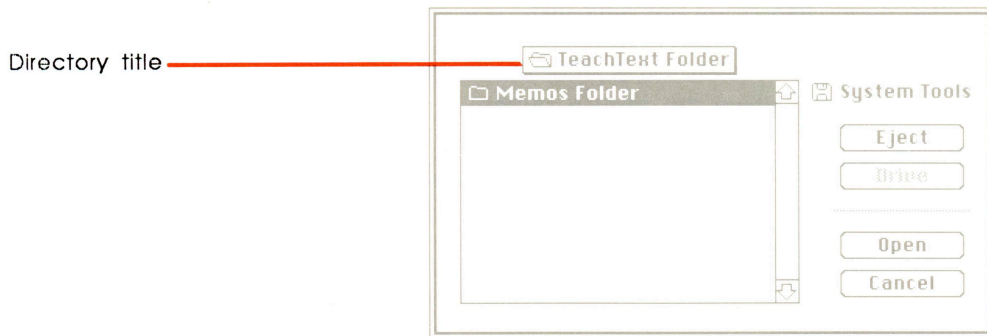
- **Close the Untitled window.**

Either click the close box or choose Close from the File menu. You don't want to start a new document right now.

- **Choose Open from the File menu.**

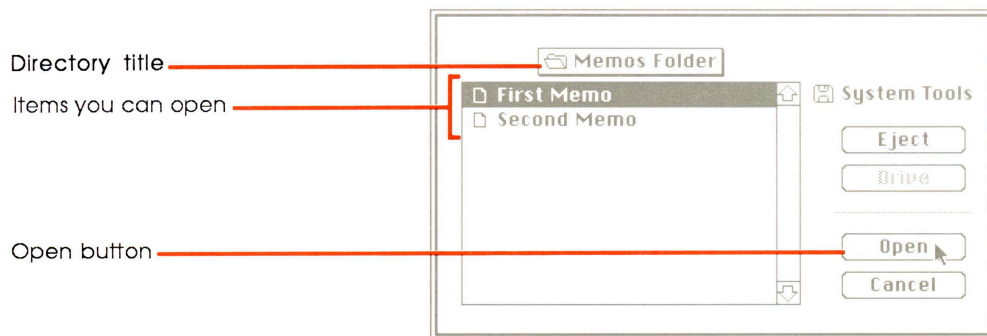


You see this dialog box:



A directory title shows you the name of the folder you're presently working in—in this case, the TeachText Folder. The box beneath it shows you all the other items in the TeachText Folder that you can open with this application—in this case, only the Memos Folder.

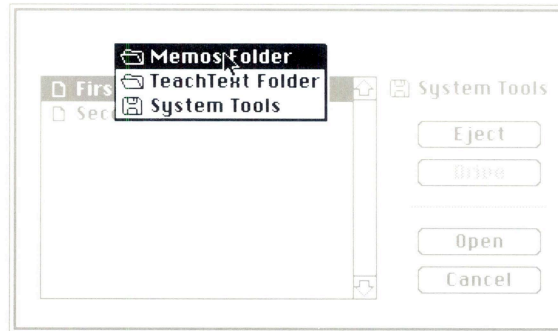
■ To open the Memos Folder, click the Open button.



As you open the Memos Folder, you move down through the hierarchy. The directory title changes to remind you where you are in the hierarchy, and the box shows you what's on the new level you just moved to—in this case, the two documents in the Memos Folder. The selected document is the one that will open when you click the Open button. If you want to open the other document, click anywhere on the other document's name to highlight it, and then click the Open button.

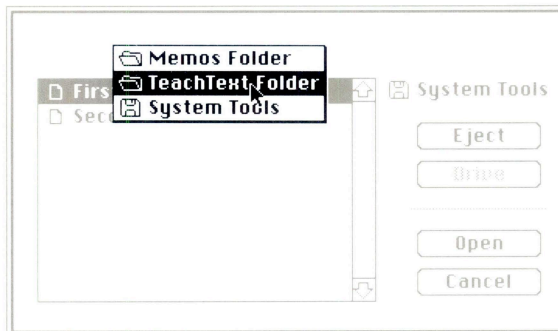
If you want to open a document that's located somewhere else in the hierarchy, you can move to another level by using the pull-down list below the directory title.

- **Position the pointer on the directory title and press and hold down the mouse button.**



This pull-down list is similar to the menus you used earlier, except rather than showing commands, this list shows the path through the hierarchy back to the top level. (The top level is always the last on the list.) You choose the level you want by dragging down the menu and selecting it.

- **Choose the TeachText Folder.**



The directory title changes again, and you see the contents of the TeachText Folder in the box—the Memos Folder.

■ **Pull down the the list below the directory title again and choose System Tools.**

The menu changes again, and you see the folders on the top level of the hierarchy—in this case, the System Folder, the TeachText Folder, the Update Folder, and the Utilities Folder.

So far, all you've seen in the window are folders and the documents you can open with TeachText. When you open a document from within an application, the dialog box shows you only folders and documents that you can open with that application. If you open a folder and you don't see anything listed in the window, that's because that folder doesn't contain anything you can open with the application you're using.

You've been moving through the hierarchy on the *System Tools* disk. For now, you'll work only on this disk, but if you wanted to open a document on another disk, you could see what's on the other disk by clicking the Drive button on the right side of the dialog box. (If you don't have a disk in another drive, the Drive button appears dimmed.) When you click the Drive button, you see the name of the disk change in the upper-right corner of the dialog box, and you see the folders and documents on the top level of that disk in the window.

If you have a one-drive system, or if you just want to switch disks in a disk drive, you can click the Eject button. This ejects the disk from the drive and lets you insert another disk. The new disk's name appears in the upper-right corner of the dialog box, along with its folders and documents in the window.

Now open one of the memos.

■ **Open the TeachText Folder.**

■ **Open the Memos Folder.**

■ **Open either of the two memo documents.**

First Memo, the first document in the directory, is automatically highlighted. If you want to open Second Memo, click on its name, and then click Open.

You use a similar technique in moving through the hierarchy when you save a document.



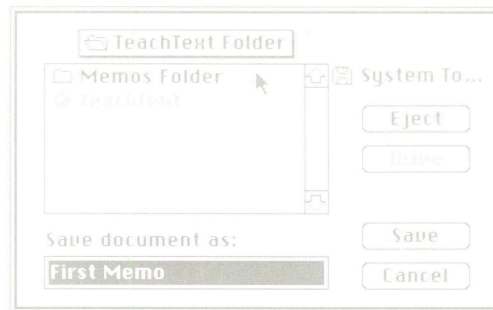
- **Choose Save As from the File menu.**

You don't need to make any changes to the document. Right now, you just want to save a version of the document with a different name.

You see the familiar Save As dialog box.

This time, you'll choose a different level of the hierarchy on which to save the document.

- **Pull down the list below the directory title and choose the TeachText Folder.**



You see the contents of the TeachText Folder—the TeachText application and the Memos Folder. The menu changes again to show you where you are in the hierarchy.

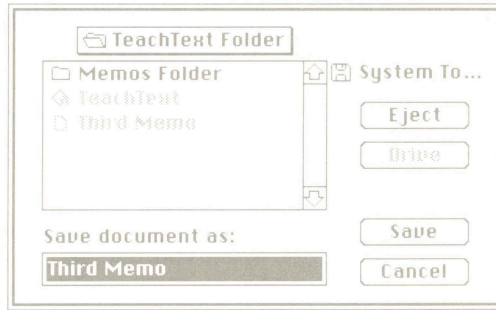
When you're *saving* a document, you see *all* the applications, folders, and documents on that level in the window. Seeing everything gives you a chance to make sure you're not saving this document with the same name as something else that's already there. That way, you won't inadvertently lose anything by using the same name.

- **Type Third Memo**

- **Click the Save button.**

You saved the new document in the TeachText Folder.

- **Choose Save As from the File menu.**



Again, you see the dialog box. This time, you see the name of the document you just saved listed in the window along with the other items in the TeachText Folder. Now you have memos saved at two different levels of the hierarchy—one at the second level in the TeachText Folder, and two at the third level in the Memos Folder.

- **Click the Cancel button.**

- **Choose Quit from the File menu to quit TeachText.**

You're finished with this document.

## Selecting more than one icon

You've learned a lot about organizing your work, but there's more. So far, whatever action you've taken has been on one document at a time. You can also take most actions on several documents at once. For example, you can move several documents from one place to another, discard them in the Trash, or find out information about them. One of the ways to select more than one icon is by using the dragging technique.

- **Close the TeachText Folder window if it's not already closed.**

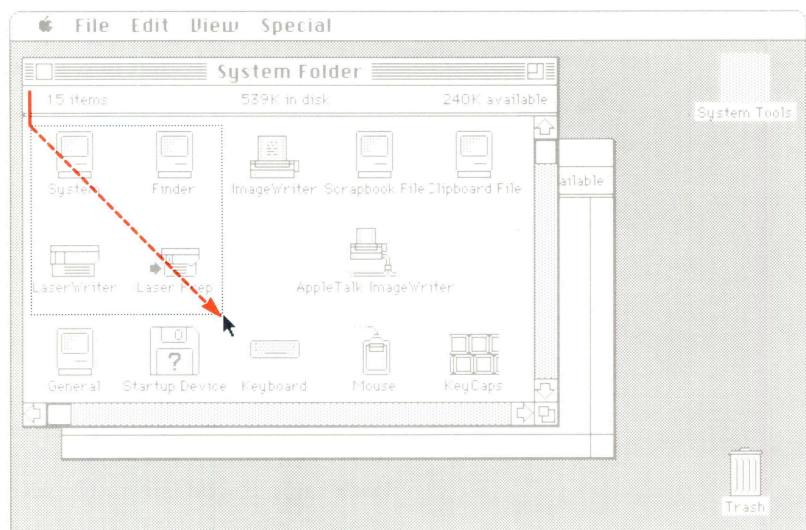
You'll need a window with lots of icons.

- **Open the System Folder.**

The name may be partially obscured by the TeachText Folder name.

- Use the size box or the zoom box to make the window bigger so you'll have plenty of room.
- Position the pointer outside one corner of a group of icons in the window and drag diagonally to the opposite corner of the group.

As you drag, a dotted rectangle appears around the icons you're selecting. When you release the mouse button, the icons are selected. You can select any group of icons that can be enclosed in a rectangle. Be sure you start dragging outside an icon. If you position the pointer on an icon, you select just that icon.



Now you can drag the whole group.

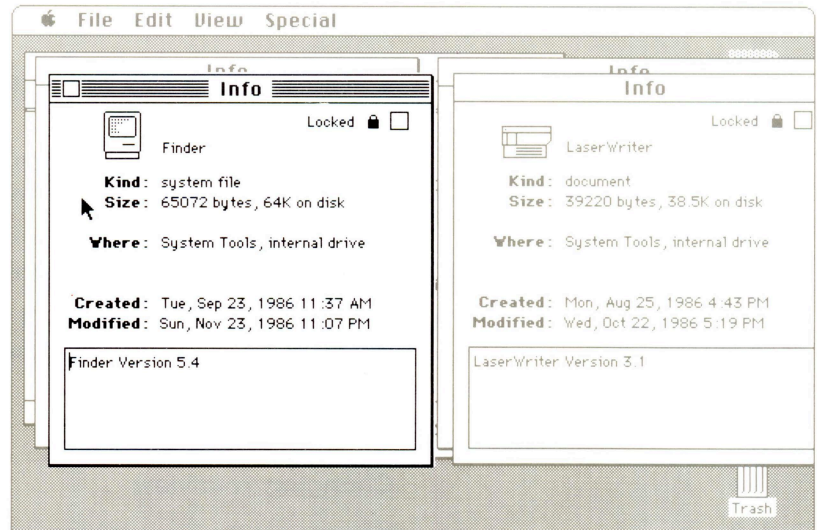
- Position the pointer on one of the icons and drag the whole group to another part of the window.

Make sure the pointer is on one of the icons. (It doesn't matter which one.) They keep their arrangement and move "in formation." The icons stay selected until you click anywhere outside any of them.

You can also choose a command to act on a group of selected icons. For example, you can find out information about an entire group of documents.

■ **Choose Get Info from the File menu.**

An **information window** appears for each icon that's selected. As each new window appears on the desktop, it overlaps the window that appeared before it.



You can move these information windows or make them active like any other windows on the desktop, but you can't change their size or scroll through them.

Software manufacturers sometimes use the Comment box in the Get Info window to record the software's version number. Applications and system software are often improved and updated, and version numbers are assigned to these updates so you can always see if you're using the most current version. Just select the application's icon and choose Get Info from the File menu.

■ **Close each information window in turn by choosing Close from the File menu or by clicking its close box.**



Each time you choose Close or click its close box, the active window closes.

There's another way to select more than one icon. Sometimes the icons you want to select aren't lined up so that you can drag a rectangle around them. If they're scattered about, you can select more than one by **Shift-clicking**.

If any icons are still selected, first click outside any of them before you select one again.

- **Select any icon by clicking it.**

- **Hold down the Shift key on the keyboard and click a second icon.**

The second icon can be any icon in the same window. You can even scroll to a different part of the window and Shift-click.

You can continue to select more icons as long as you hold down the Shift key when you click. You can also Shift-click to deselect an icon.

Any action you choose now will affect all the selected icons. You can choose a command for them or move them by dragging the whole group.

## **Changing your view**

You can use the Finder's View menu to look at your documents in whatever arrangement you want.

- **Choose the By Name command from the View menu.**

The contents of the active window are arranged alphabetically by name. You can also view them by date, size, kind or with small icons that give you more space in the directory window.

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## Read Me documents

Earlier in this tutorial, you used TeachText to learn how to start up an application and create, edit, and save documents. But there's another reason TeachText is included on the *System Tools* disk. You can use TeachText for Read Me documents—documents that you can open and read without having to use a full-feature word processing application.

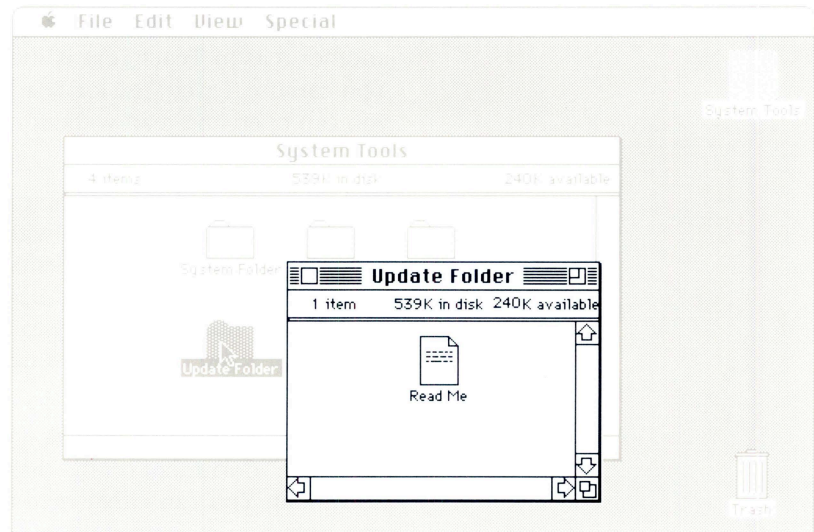
With TeachText, Apple Computer and other manufacturers can include Read Me documents with new applications and hardware products, or with updated versions of system software, to make sure the information you get is as up-to-date as possible. And an entire manual may not be necessary to teach you how to use some applications and desk accessories. A Read Me document may be all that's needed.

When you get a new application or system software disk and see a "Read Me" document on the disk, use TeachText to open the document. You can either read the document on the screen or, if you have a printer attached to your Macintosh SE, you can print the document so you have a copy of it on paper.

Now you'll use TeachText to read a plain text document on the *System Tools* disk.

- **Close the System Folder window if it's not already closed.**
- **Open the Update Folder.**

You see a document called *Read Me* in the window.



■ **Open the Read Me document.**

You can read the document now or come back to it later when you've finished this tutorial.

If you have a printer attached to your computer, you can print a copy of the document. (Wait until you finish this tutorial. See "Printing" in Chapter 3 for instructions.)

■ **Close the Read Me document.**

■ **Choose Quit from the File menu.**

■ **Close the Update Folder to return to the System Tools window.**

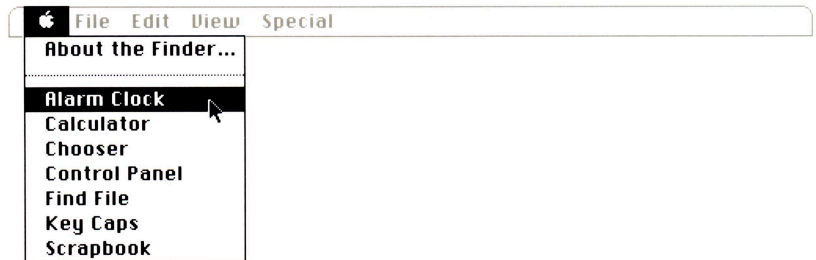
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## Using a desk accessory

Macintosh **desk accessories**—the Alarm Clock and Calculator, for example—are always available on the Macintosh desktop, no matter what application you’re using or whether you’re using any application at all.

You choose desk accessories from the Apple menu on the far left side of the menu bar.

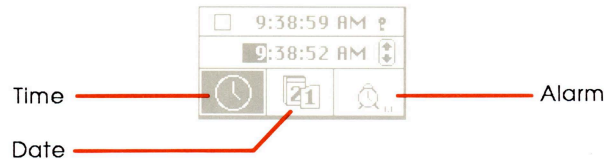
- Choose Alarm Clock from the Apple menu.



- Click the “lever” on the right side of the Clock.



The Alarm Clock expands to display and allows you to set whatever is highlighted in the bottom panel—the time, date, or alarm.



See “Using Desk Accessories” in Chapter 3 and “Desk Accessories” in Chapter 4 for descriptions of the other accessories in the Apple menu.

You can click the icon that represents what you want to set, and then click the digits you want to change. Click the up arrow to advance the numbers, or click the down arrow to go backward. Click in the top panel to set the clock.

To display just the Alarm Clock again, click the lever. When you’re finished with the desk accessory, click its close box.



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## Before you go

You're almost finished with this tutorial. Before you go, drag TeachText from the folder that you made earlier to the System Tools directory window so you can find it easily later. If someone else is likely to use the *System Tools* disk and this tutorial after you, it might be helpful to the next person if you drag the TeachText Folder to the Trash—but be sure to remove TeachText from the folder first!

---

## Using application disks

Most application disks are startup disks—that is, they contain both a System file and a Finder file in the disk's System Folder. It's always best to make sure your application disks contain the most current versions of system software. That way, they can take advantage of the latest improvements in system software. You may need to update your application disks with the system files on the *System Tools* disk. To update your startup disks, you use the Installer, a utility program in the Utilities Folder on the *System Tools* disk. To find out if your startup disks need updating, you can check the version numbers for the two files, Finder and System.

First check the Finder.

- **Choose Shut Down from the Special menu.**

Your computer ejects the disk from the disk drive.

- **Insert the application's startup disk and then click the Restart button on the screen.**

- **Choose About the Finder from the Apple menu.**

A window will appear that tells you the version number of the Finder on that disk. (The lower the number, the earlier the version.) The Finder should be version 5.4 or higher.

Now check the System file.

- **Click anywhere in the Finder information window to close the window.**

- **Open the icon for the application disk, if it's not already open.**
- **Open the System Folder.**
- **Select the System icon and choose Get Info from the File menu.**

Most application disks include the version number of the System file in the Comment box in the Get Info window. If you don't see a version number in the comment box, check the manual that came with the application. The System file should be version 4.0 or higher.

If the application's Finder and System files are earlier versions, see "Using the Installer" in Chapter 3 for step-by-step instructions for updating the disk.

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## **Starting your own work**

You probably have some work to do on your Macintosh SE. But first, if your system includes the internal hard disk, go now to Appendix A, "The Internal Hard Disk," to get your hard disk set up and running. Be sure to use the Installer to update each startup disk, and then read the manuals that came with the applications you want to use. If you'd like to know a bit more about the Macintosh SE before you start using an application, read Chapter 4, "The Macintosh SE: Reference." When you want some reminders or more information about using the Finder to organize your work, come back to Chapter 3 of this book, "The Macintosh SE: Step by Step." Enjoy!









## Chapter 3



### The Macintosh SE: Step by Step



This chapter summarizes the basic techniques you'll use whenever you work with your Macintosh SE computer—from clicking and dragging to using the desk accessories in the Apple menu. It also describes the steps to take when you want to use the Finder to manage your documents and disks. For example, it tells you how to move a document from one disk to another, how to copy a document or an entire disk, and how to remove documents.

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## How to use this chapter

You don't have to read this chapter in any particular order; each topic is independent of the others. When you want to know how to do something, go to the section that explains that task. There you'll find a brief, general discussion and step-by-step instructions. Read the column labeled for the task you want to perform and follow the steps, reading down the column. Some more detailed tasks are numbered and presented across columns, with important details explained in the column below each step.

## Important

This chapter tells you in the most compact way possible how to perform Macintosh tasks. Depending on your level of computer experience, you might need more detailed information than what you'll find here. Nearly everything in this chapter is covered in greater depth in Chapter 4, "The Macintosh SE: Reference." Look in that chapter to see how each of these topics fits into "the big picture."

Major topic

General discussion

Step-by-step instructions

Subtopics

### Using the Chooser

Choose the Chooser desk accessory from the Apple menu to connect or disconnect the AppleTalk network, to choose between devices connected directly to the printer or modem ports, or to choose printers or other devices on the AppleTalk network.

(AppleTalk is a communications network you can use to connect computers and to share printers and other devices on the network. See "AppleTalk Personal Network" in Chapter 5 for more information.)

The Chooser shows icons for the devices available to you, based on the resources in the current startup disk. See "Using the Installer" in this chapter for information on the Installer, a utility program that installs the Chooser so that it appears in the Apple menu and updates the resources on your startup disks with their most current versions.

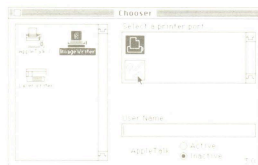
If you use the Chooser within an application to choose a printer, choose Page Setup to confirm the settings you want before you choose Print.

### To connect or disconnect AppleTalk

- Click **Active** if you're physically connected to AppleTalk.
- Click **Inactive** if you physically disconnect AppleTalk.
- The AppleTalk connection setting in the Chooser should always match your physical setup. When you physically connect or disconnect AppleTalk, always use the Chooser immediately to click the appropriate box.
- Type your name in the text box so AppleTalk can let other users on the network know when you're using a shared device.

### To choose a printer connected directly to a port

- Click the icon that represents the type of printer you want to use.
- If necessary, use the scroll bar on the right side of the icon box to find the icon.
- When you click an icon, a box appears that presents icons for the printer and modem ports.
- Click the icon that represents the port your printer is connected to—either the printer port or the modem port.



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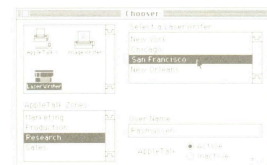
### To choose a device on an AppleTalk network

- Click the icon that represents the type of device you want to use.
- If necessary, use the scroll bar on the right side of the icon box to find the icon.
- When you click an icon, a Select box appears and lists the names of all the devices that are on your network.
- Click the device name to select the device you want.
- Type your name in the text box so AppleTalk can let other users on the network know when you're using a shared device.
- For more information about AppleTalk, see "AppleTalk Personal Network" in Chapter 5.

### To choose a device on another AppleTalk zone

- AppleTalk networks can be linked together to form an interconnected series of AppleTalk zones. If your network is linked with other AppleTalk networks, and if you have access to the other zones, you can use the Chooser to scan the other zones for devices on those zones.
- Click the icon that represents the type of device you want to use.
- If necessary, use the scroll bar on the right side of the icon box to find the icon.
- When you click an icon, new boxes appear. The Zones box lists the zones you have access to. The zone that first appears highlighted is the zone your

- system is on. The Select box lists the names of all the devices of the type you just chose that are on the highlighted zone.
- Scan each zone by clicking on its name until you find the device you want to use.
- Click the device name to select the device you want.
- Type your name in the text box so AppleTalk can let other users on the network know when you're using a shared device.
- For more information about AppleTalk and AppleTalk zones, see "AppleTalk Personal Network" in Chapter 5.



Using the Chooser 87

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## Summary of mouse techniques

You can do all your work on the Macintosh SE (except type text and numbers) with five mouse techniques:

- **click:** to select or make active
- **press:** to cause a continuous action
- **drag:** to select or move
- **double-click:** to open applications, documents, and folders quickly
- **Shift-click:** to extend or shorten a selection

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### To click

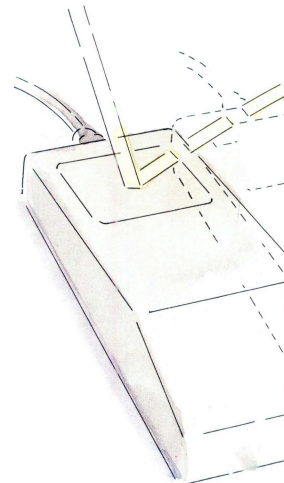
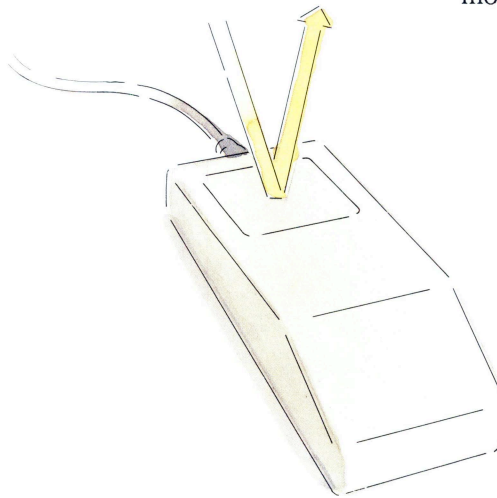
- Position the pointer on what you want to select or make active.
- Press and quickly release the mouse button.

---

### To press

- Position the pointer on a menu title, a scroll arrow, or wherever you want the action to occur.
- Without moving the mouse, press and hold the mouse button.

As long as you hold down the mouse button, the effects of pressing continue. Pressing on scroll arrows results in continuous scrolling. Pressing on a menu title pulls down the menu and keeps it down until you release the mouse button.





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## To drag

- Position the pointer on something.
- Press and hold down the mouse button and move the mouse.
- Release the mouse button.

You can usually cancel a drag in process by moving the pointer back to where it started. Cancel a drag in a menu by moving the pointer off the menu. Cancel moving an icon or window by moving the pointer into the menu bar.

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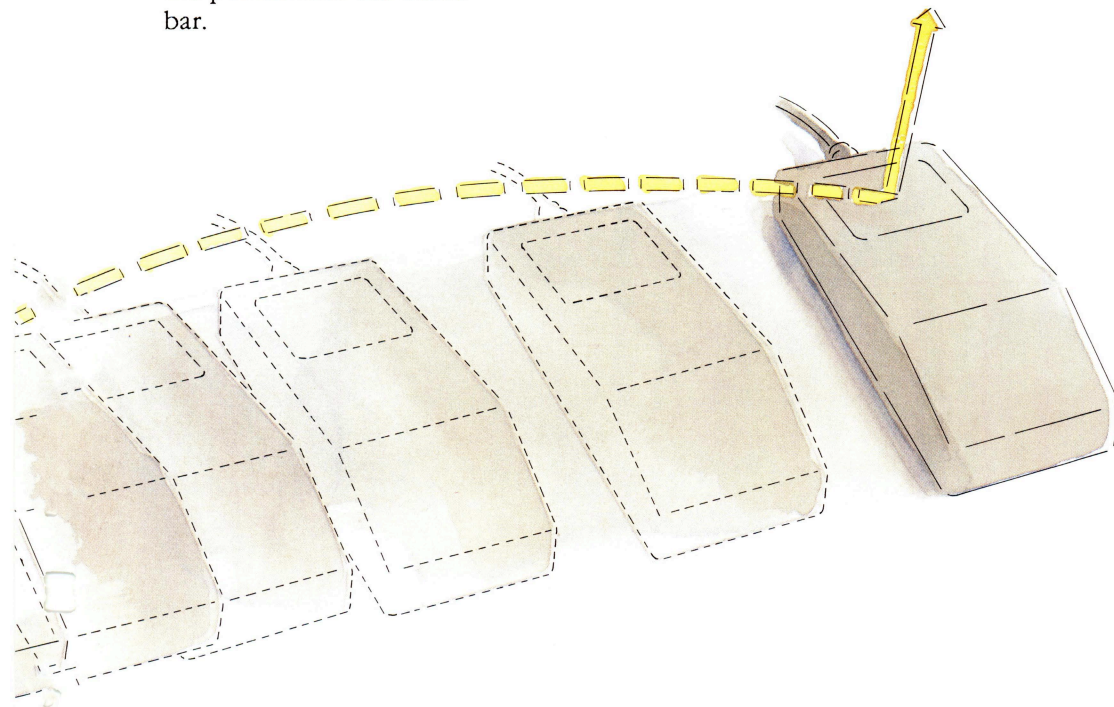
## To double-click

- Position the pointer on something.
- Press and release the mouse button twice in quick succession.

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## To Shift-click

- Select something by clicking or dragging.
- Hold down the Shift key while you continue to select (or deselect) by clicking or dragging.



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## Handling windows

A window frames its contents. The contents may be the directory of a disk or folder, a desk accessory, or a document you create with an application.

A window always has a title bar and may have

- ☐ scroll bars
- ☐ a close box
- ☐ a size box
- ☐ a zoom box

Each application's manual tells you more about windows in that application.

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## To activate a window

- Click anywhere in the window.

Activating a window brings it to the front, where it may overlap or completely cover other windows. To see covered windows, move the active window or make it smaller.

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## To move a window

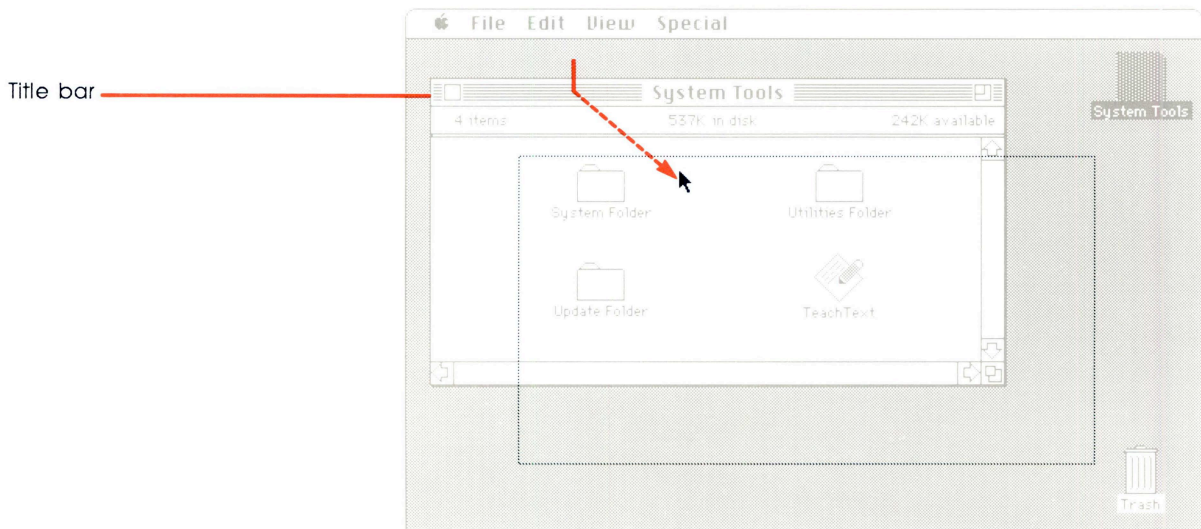
- Position the pointer anywhere in the title bar of the window except the close box or zoom box (if any).

- Drag the window to a new location.

The window becomes the active window if it's not already.

To cancel the move, move the pointer into the menu bar. You can't drag a window completely off the desktop.

To move a window without activating it, hold down the Apple key while you drag.



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## To change a window's size

- Activate the window by clicking in it.
- Move the window so that the size box in the bottom-right corner is visible.
- Drag the size box.

Dragging horizontally changes the width, dragging vertically changes the height, and dragging diagonally changes both. The new dimensions take effect only when you release the mouse button.

If there's a zoom box in the window's top-right corner, you can click it to expand the window—clicking an expanded window's zoom box shrinks the window back to its smaller size. Some windows don't have a size box or a zoom box.

Close box

Zoom box

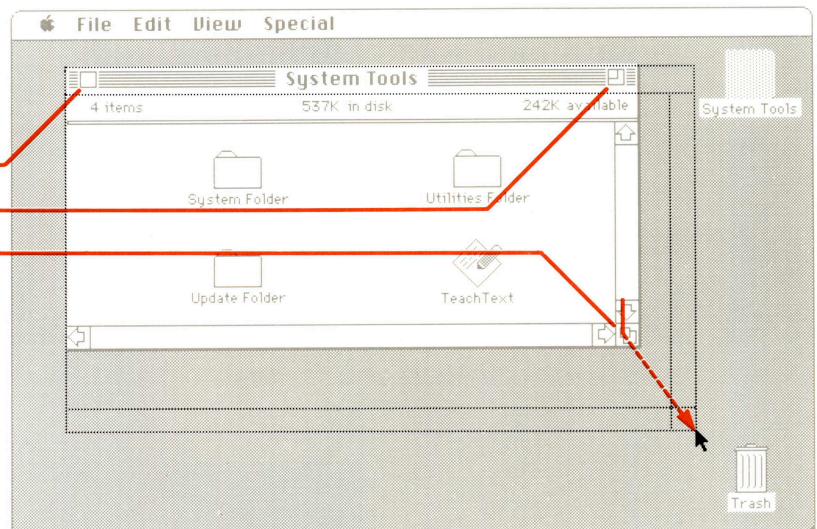
Size box

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## To close a window

- Activate the window by clicking anywhere inside it.
- Choose Close from the File menu or click the close box on the left in the title bar.

Some windows don't have a close box.





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## Scrolling

Scroll bars let you see more of a directory (that is, a list of a disk's contents) or a document.

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### To scroll line by line

- Click the arrow that points in the direction of what you want to see.

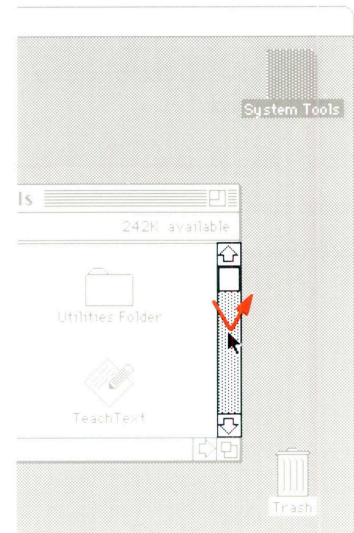
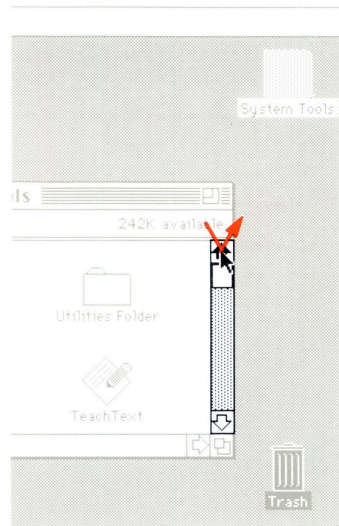
You can scroll continuously line by line by pressing the scroll arrow.

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### To scroll by the windowful

- Click in the gray area of the scroll bar.

You can scroll continuously by the windowful by pressing in the gray area of the scroll bar.



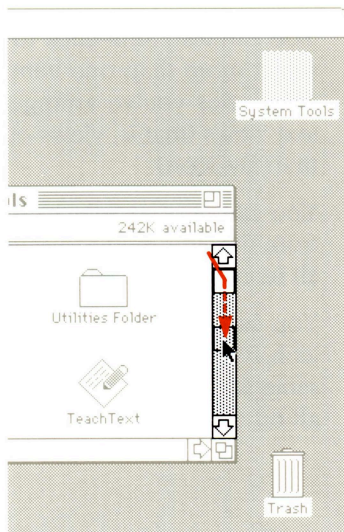
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## To scroll quickly to any part of a directory or document

- Drag the scroll box to a place in the scroll bar that represents the approximate position that you want to see.

The scroll bar represents the length of the directory or document; for example, if you want to go to about the middle of a directory or document, drag the scroll box to the middle of the scroll bar.

Some applications show the page numbers in the scroll box.



---

## Selecting icons

In the Finder, you select by clicking or dragging.

See each application's manual for how to select information in that application. See "Editing Text" and "Renaming" in this chapter for more about how to select icon names and edit them.

---

## To select an icon

- Click anywhere on it.  
Clicking an icon's name also selects the icon.

---

## To select more than one icon

When they're grouped together:

- Position the pointer outside one corner of a group of icons.
- Drag to the opposite corner.

Holding the Shift key down while you click a selected icon deselects it.

When they aren't grouped together:

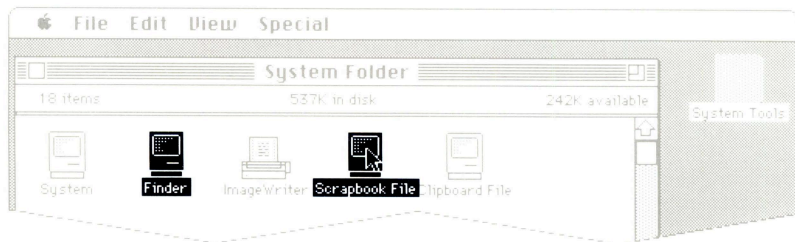
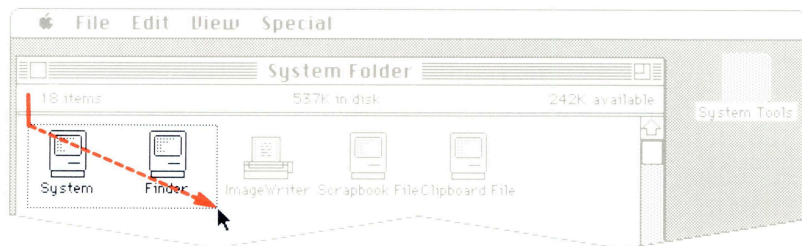
- Select one icon by clicking.
- Hold down the Shift key while you continue to select icons by clicking or dragging.

Holding the Shift key down while you click a selected icon deselects it.

You can also Shift-click to select more than one item in directories you've arranged in text views (that is, views other than by icon).

You can choose Select All from the Edit menu to select all icons in the active window.

You can select more than one icon only when they're in the same window or when they're all on the desktop.





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## Editing text

In the Finder, you can enter and edit

- the names of disks, documents, folders, and applications
- text in desk accessories such as Scrapbook and Note Pad
- text in the comment box of information windows (which you open by choosing Get Info from the File menu)

See each application's manual for more on how to enter and edit text in that application.

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## To insert text

- Click to select the insertion point.

You can also use the direction keys to move the insertion point.

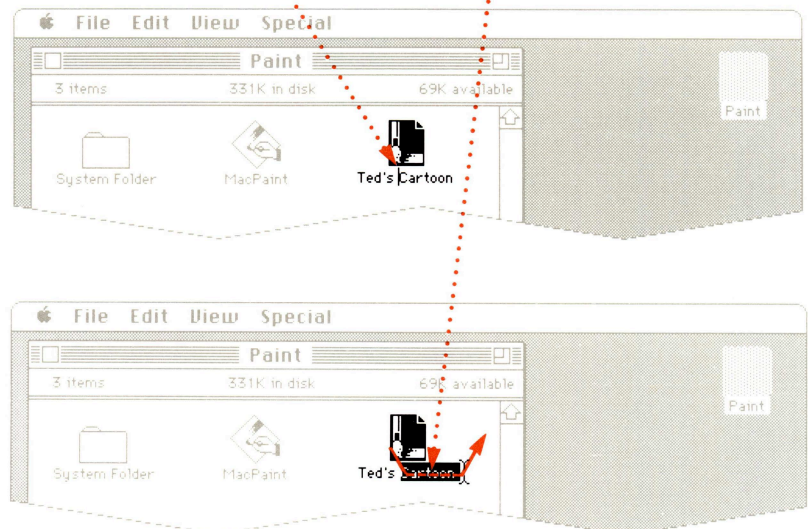
- Type to add text at the insertion point.

When there's no existing text (sometimes in dialog boxes, for example), the insertion point may already be selected.

---

## To select text

- Drag across the text (diagonally if there's more than one line) to the end of the text you want to select. In most applications, you can double-click a word to select it quickly.



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## To move text

- Select by dragging across the text.
- Choose Cut from the Edit menu.
- Select the insertion point by clicking where you want the text to go.
- Choose Paste from the Edit menu.

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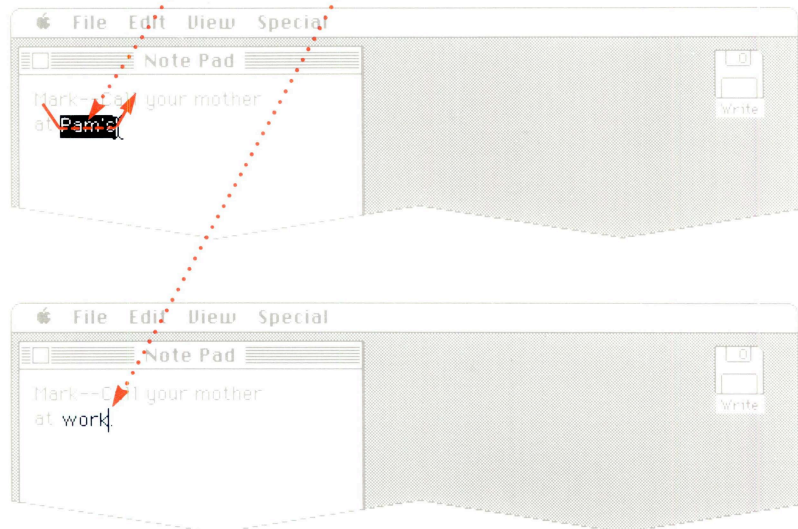
## To copy text

- Select the text by dragging across it.
- Choose Copy from the Edit menu.
- Select the insertion point by clicking where you want the copied text to go.
- Choose Paste from the Edit menu.

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## To replace text

- Select the text by dragging across it.
- Type what you want to replace the text with, or choose Paste from the Edit menu to replace the text with what was last cut or copied.



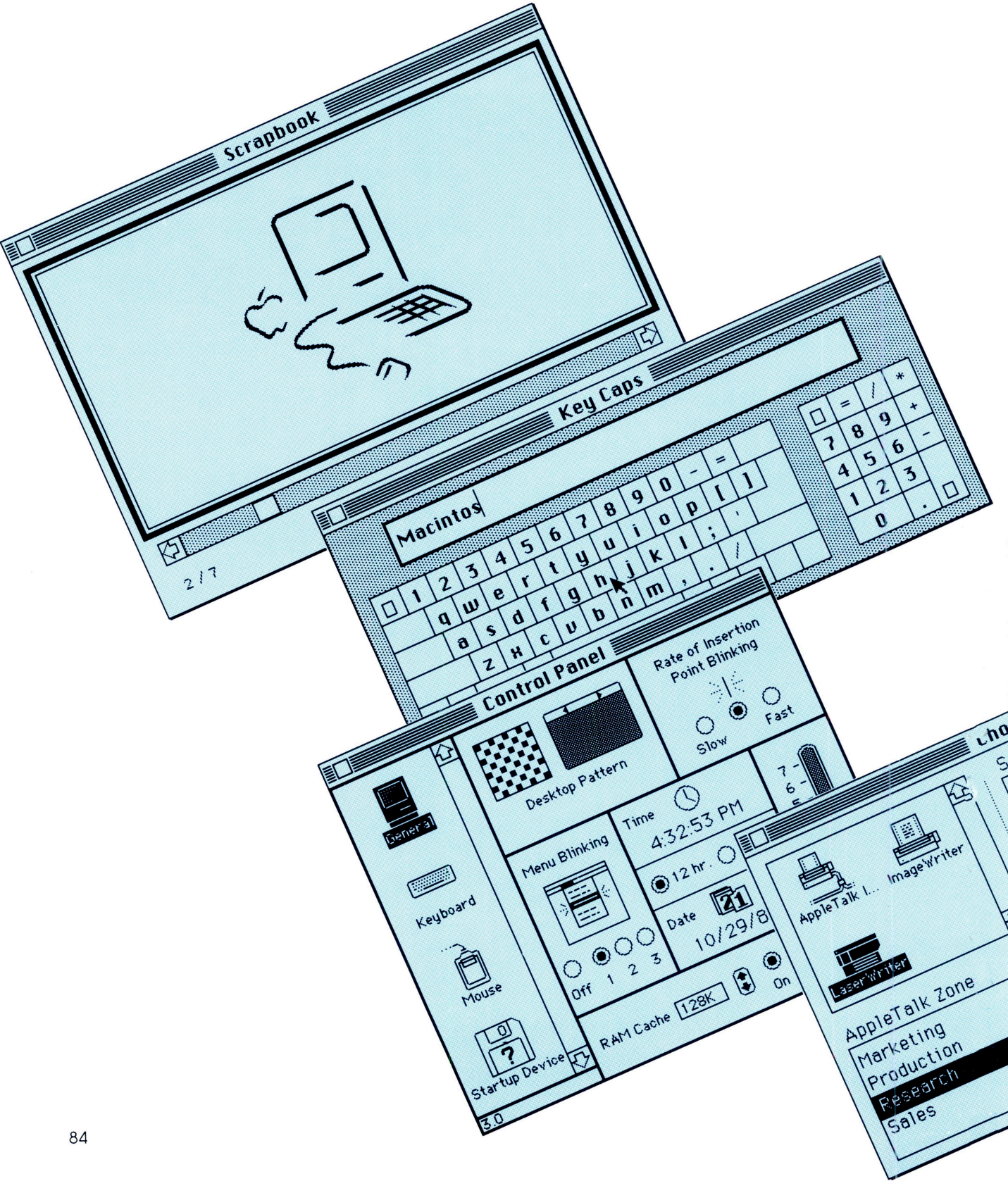
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## To remove text

- Select the text by dragging across it.
- Press the Delete key or choose Cut or Clear from the Edit menu.

If you're really removing the text, rather than moving it, using the Delete key is the fastest way to do it.







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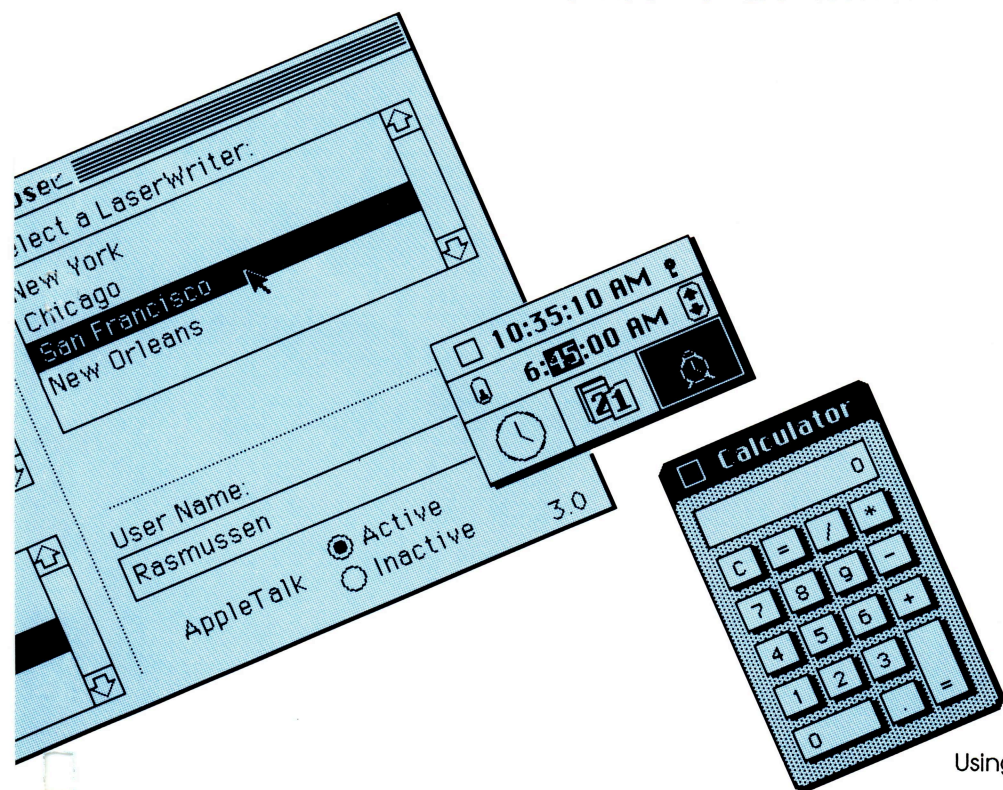
## Using desk accessories

Desk accessories are “mini-applications” you can use in the Finder or while you’re using any application. Desk accessories let you do simple calculations while you’re working on documents, tell the computer which printer to use, and even keep a scrapbook full of your favorite illustrations or of text you use in a variety of documents.

Some desk accessories—Alarm Clock, Calculator, Chooser, Control Panel, Key Caps, Scrapbook, and Find File—are installed automatically on your application disks when you update them with the system software on the *System Tools* disk. You can also use the Font/DA Mover to add or remove desk accessories from your startup disks. The desk accessories installed on a startup disk are available in the Apple menu whenever that disk is the current startup disk. The *Utilities* disk includes a desk accessory file with Note Pad and Puzzle—desk accessories you might want to add to other startup disks. You can also purchase other desk accessories and add them to your startup disks.

This section explains how to use the Chooser, the Control Panel, Find File, and the Scrapbook. See “Desk Accessories” in Chapter 4 for more information about other desk accessories.

For more information on startup disks, see “Startup Disks” in Chapter 4. See the *Macintosh Utilities User’s Guide* for more information about the Font/DA Mover.



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## Using the Chooser

Choose the Chooser desk accessory from the Apple menu to connect or disconnect the AppleTalk network, to choose between devices connected directly to the printer or modem ports, or to choose printers or other devices on the AppleTalk network.

(AppleTalk is a communications network you can use to connect computers and to share printers and other devices on the network. See “AppleTalk Personal Network” in Chapter 5 for more information.)

The Chooser shows icons for the devices available to you, based on the resources in the current startup disk. See “Using the Installer” in this chapter for information on the Installer, a utility program that installs the Chooser so that it appears in the Apple menu and updates the resources on your startup disks with their most current versions.

If you use the Chooser within an application to choose a printer, choose Page Setup to confirm the settings you want before you choose Print.

---

## To connect or disconnect AppleTalk

- Click Active if you’re physically connected to AppleTalk.
- Click Inactive if you physically disconnect AppleTalk.

The AppleTalk connection setting in the Chooser should always match your physical setup. When you physically connect or disconnect AppleTalk, always use the Chooser immediately to click the appropriate box.

- Type your name in the text box so AppleTalk can let other users on the network know when you’re using a shared device.

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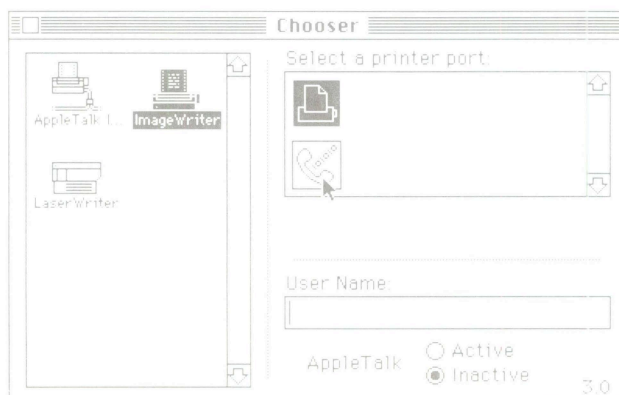
## To choose a printer connected directly to a port

- Click the icon that represents the type of printer you want to use.

If necessary, use the scroll bar on the right side of the icon box to find the icon.

When you click an icon, a box appears that presents icons for the printer and modem ports.

- Click the icon that represents the port your printer is connected to—either the printer port or the modem port.





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## To choose a device on an AppleTalk network

- Click the icon that represents the type of device you want to use.

If necessary, use the scroll bar on the right side of the icon box to find the icon.

When you click an icon, a Select box appears and lists the names of all the devices that are on your network.

- Click the device name to select the device you want.
- Type your name in the text box so AppleTalk can let other users on the network know when you're using a shared device.

For more information about AppleTalk, see “AppleTalk Personal Network” in Chapter 5.

---

## To choose a device on another AppleTalk zone

AppleTalk networks can be linked together to form an interconnected series of AppleTalk zones. If your network is linked with other AppleTalk networks, and if you have access to the other zones, you can use the Chooser to scan the other zones for devices on those zones.

- Click the icon that represents the type of device you want to use.

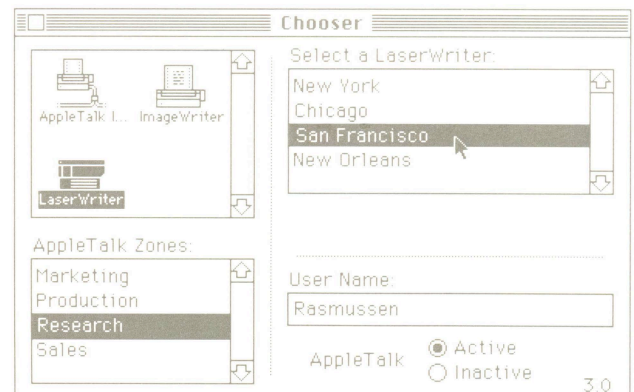
If necessary, use the scroll bar on the right side of the icon box to find the icon.

When you click an icon, new boxes appear. The Zones box lists the zones you have access to. The zone that first appears highlighted is the zone your

system is on. The Select box lists the names of all the devices of the type you just chose that are on the highlighted zone.

- Scan each zone by clicking on its name until you find the device you want to use.
- Click the device name to select the device you want.
- Type your name in the text box so AppleTalk can let other users on the network know when you're using a shared device.

For more information about AppleTalk and AppleTalk zones, see “AppleTalk Personal Network” in Chapter 5.



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## Using the Control Panel

Choose Control Panel from the Apple menu to set your personal Macintosh SE preferences. In the Control Panel, you select icons that represent parts of your Macintosh SE system. Selecting an icon brings up a box of features for you to choose among.

Make sure you update each of your startup disks to have the current Control Panel. See “Using the Installer” in this chapter.

See “Control Panel” under “Desk Accessories” in Chapter 4 for more information about the Control Panel.

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## To set the Desktop Pattern

You can customize your desktop by selecting from a variety of desktop patterns or designing your own.

- Click the General icon if it isn't already selected.

The Control Panel shows two views of the desktop, a magnified view and a sample desktop view where you can look at your new pattern before you apply it to your desktop.

- Click dots in the magnified view to change them from black to white or vice versa, or drag through a group of dots to change all of them.
- Click the white “menu bar” in the sample desktop view to see a sample pattern. (Click on the right side of the bar to see the next pattern; click on the left side to back up.)
- Set the pattern by clicking the “desktop” below the white bar.

---

## To set the Speaker Volume

- Click the General icon if it isn't already selected.
- Adjust the volume you want by dragging the knob up or down.

Setting the lowest volume causes the Macintosh SE to alert you subtly by blinking the menu bar rather than by beeping.

---

### To set the Rate of Insertion Point Blinking

When you click the pointer to insert text in a document, the insertion point blinks so it's easier to see on the screen. You can adjust the rate of its blinking.

- Click the General icon if it isn't already selected.
- Click any button from Slow to Fast to set the rate at which the vertical bar marking the insertion point blinks.

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### To set the Rate of Menu Blinking

When you choose items from a menu, the items blink before performing an action or setting. You can set the number of times menu items blink.

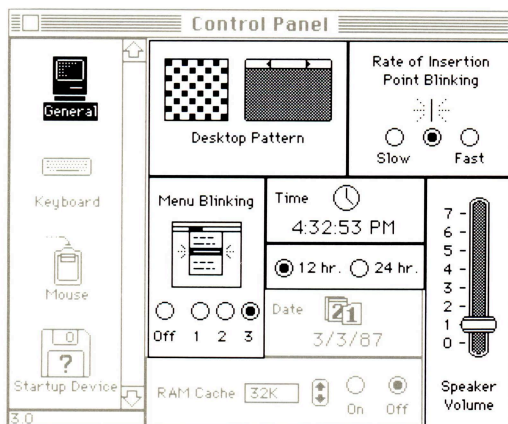
- Click the General icon if it isn't already selected.
- Click any button from 1 to 3 to set the number of times menu items blink.

If you don't want the menu items to blink, click Off.

---

### To set the Time

- Click the General icon if it isn't already selected.
- To select a time format, click either 12 hours or 24 hours.
- Click the digits you want to change; then click the up or down arrow to scroll the numbers higher or lower.





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## To set the Date

- Click the General icon if it isn't already selected.
- Click the digits you want to change; then click the up or down arrow to scroll the numbers higher or lower.

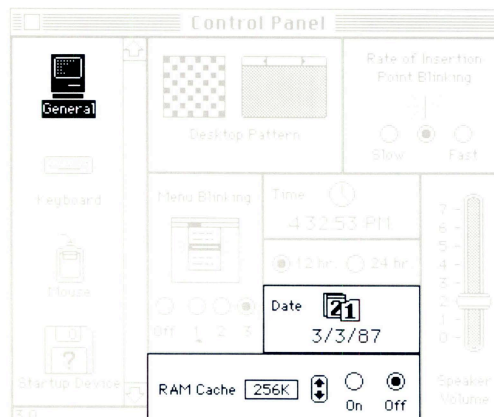
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## To use the RAM Cache

Using the RAM cache can greatly speed up your work with Macintosh SE. When you use the RAM cache, an application stores some of the information it needs in a part of memory you reserve just for this. Then, if the application needs the information again, it doesn't have to get it from the disk, but rather can get it much more quickly from the RAM cache in memory.

Using the RAM cache does make less memory available to applications, so you might not want to use it (or just use a smaller amount of it) with applications that require large amounts of memory. (A good rule of thumb is to use no more than one fourth of the computer's available system memory—256K if your system doesn't have a RAM expansion kit.)

- Click the General icon if it isn't already selected.
- Set RAM Cache On.
- Use the arrows to scroll to the amount of memory you want to use for the RAM cache.



---

## To set the Key Repeat Rate

When you press and hold down a character key, the Macintosh SE begins repeating that character. You can set the rate at which a pressed key will repeat.

- Click the Keyboard icon if it isn't already selected.

If necessary, use the scroll bar to bring the Keyboard icon into view.

- Click any button from Slow to Fast to set the rate.

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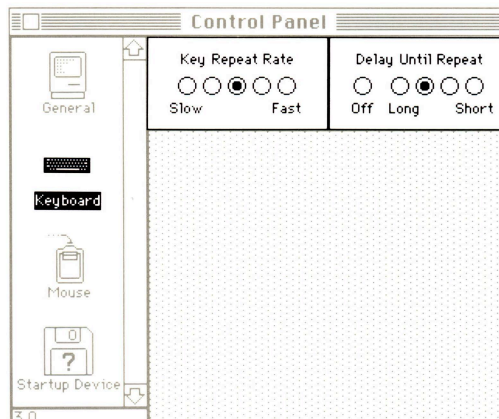
## To set the Delay Until Repeat

Delay Until Repeat sets the length of time the Macintosh SE waits until it starts repeating a key you're pressing. Set a longer delay if you're getting a lot of repeated keys when you don't intend them.

- Click the Keyboard icon if it isn't already selected.

If necessary, use the scroll bar to bring the Keyboard icon into view.

- Click any button from Long to Short to set the length of time the Macintosh SE waits before repeating a key you're pressing. Click Off to turn off the key-repeating feature.



## To set Mouse Tracking

You can adjust mouse tracking so you don't have to move the mouse as far as you otherwise would when you want to jump to another part of the screen.

- Click the Mouse icon if it isn't already selected.

If necessary, use the scroll bar to bring the Mouse icon into view.

- Click any button from Slow to Fast.

OR

- Click the Very Slow button if you're using a graphics tablet.

The Very Slow setting keeps the pointer speed constant.

## To set the Double-Click Speed

- Click the Mouse icon if it isn't already selected.

If necessary, use the scroll bar to bring the Mouse icon into view.

- Click the leftmost button for the Macintosh SE to interpret fairly slow successive clicks as a double click.
- Click the rightmost button to require a faster finger on the mouse button.
- Click the middle button if you want something in between.

## To choose your Startup Device

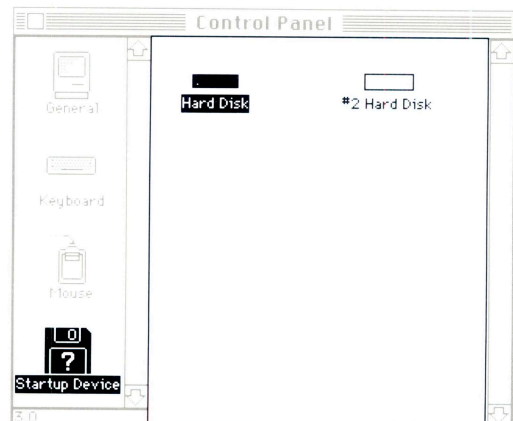
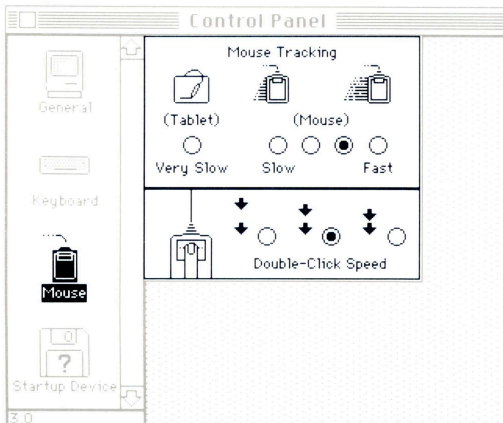
If you have more than one device that you can use to start up your Macintosh SE, you can set one as the startup device. The system will go directly to that device before going through its normal scanning sequence. (For more on the scanning sequence, see "Current Startup Disk" in Chapter 4.)

- Click the Startup Device icon.

Use the scroll bar if necessary to bring the Startup Device icon into view.

- Click the icon that represents the device you want to start up from.

To deselect an icon, hold down the Apple key and click the icon.





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## Using Find File

Use Find File to find any folder or file (a document, application, or system file) on a disk.

The hierarchical file system makes it easy to store dozens of documents in different folders—especially on a hard disk. You can even store several documents or folders with the same name in different places, or put folders within folders within folders. (See “Using the Finder to Manage Documents, Folders, and Applications,” later in this chapter.) But all that flexibility makes it easy to lose track of where you’ve stored a particular document. Find File locates the document or folder for you.

Find File also tells you when the file was created, when you last changed it, how big it is, and how much space it takes up on the disk.

You can use Find File from either the Finder or from an application. Find File will beep when it’s finished searching.

---

### 1. Choose Find File from the Apple menu.

The Find File box appears, and a new menu title, Find File, appears on the menu bar.

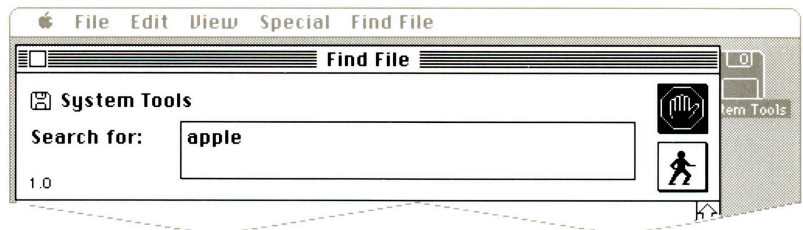
---

### 2. Type the name (or part of the name) of the file you’re looking for.

If you type *apple*, Find File will look for any folder or file that has the word *apple* in any part of its title—for example, *AppleTalk*, or *Letter to Apple*, or *applesauce*.

If you type several words (or partial words) separated by spaces, Find File looks for titles that have both of those words or partial words in them. (Technically speaking, it does an AND search.) For example, *apple letter* finds only *Letter to Apple*, but not *applesauce*, *AppleTalk*, or *Letter to Mom*, because only *Letter to Apple* contains both *apple* and *letter*.

- To search for a file on a disk in another drive, click on the current disk’s icon in the upper-left corner of the Find File window.



**3. If necessary, use the Find File menu to direct the search.**

Choose Search Here from the Find File menu to choose another disk or to limit the search to a specific folder.

- To change disks, click Eject.
- To change drives, click Drive.
- To open the folder highlighted in the directory, click Open Folder (or double-click on the folder's name).
- To close the currently opened folder and to drop back to the previous level in the directory, click on the name of the disk above the Eject button.
- To select the current folder or disk for searching, click OK.
- To cancel limited searching, click Cancel.

**4. Click the running man icon.**

Find File starts a systematic search of all the folders and files on the current disk, looking for titles that match what you've typed into the text box.

Each time it finds a match, Find File displays the name of that file or folder.

To stop the search, click the stop icon. Once you click the stop icon, the search is canceled. Clicking the running man icon again will not resume the search.

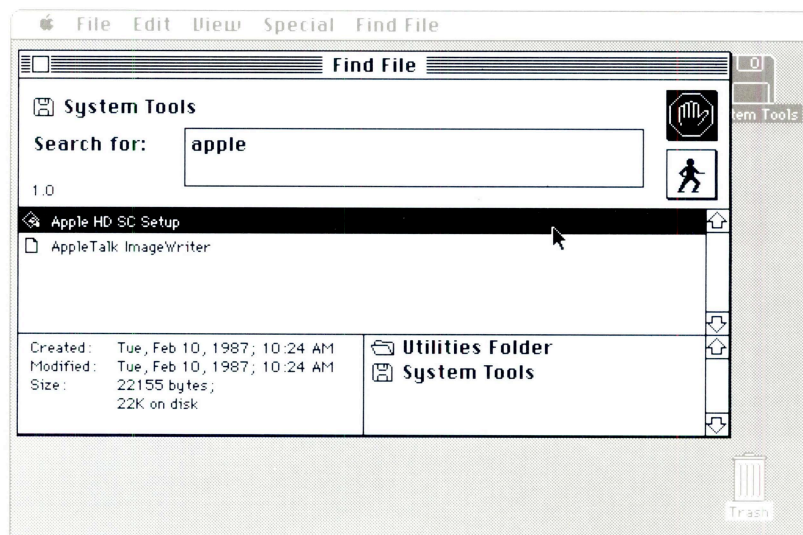
When Find File is finished searching, it beeps to let you know it's finished.

**5. Select the title or folder you're interested in.**

In the box at the lower right, Find File shows you the path to that file or folder.

In the box at the lower left, you'll find information about the file or folder you've selected—information about when it was created, when it was last modified, and its size.

You don't have to wait for Find File to stop searching to get information; just click the title you're interested in at any time.



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## Using the Scrapbook

You can paste your favorite pictures and text into the Scrapbook and retrieve them whenever you want to use them again. For example, you might keep your letterheads there. You can cut, copy, and paste images to and from the Scrapbook, your documents, or any desk accessory that uses text.

The contents of the Scrapbook are stored in the Scrapbook file on the current startup disk. You can move these Scrapbook files among your startup disks to customize the disks with the contents you want. See “Copying or Moving a Document, Folder, or Application to a Different Disk” later in this chapter and “Current Startup Disk” in Chapter 4.

Depending on the size and contents of the image you paste into the Scrapbook, you may not see the entire image until you paste it somewhere else.

---

## To add an image to the Scrapbook

- With a document or desk accessory open, select the text or pictures you want to add to the Scrapbook.

See each application’s manual for how to select using that application.

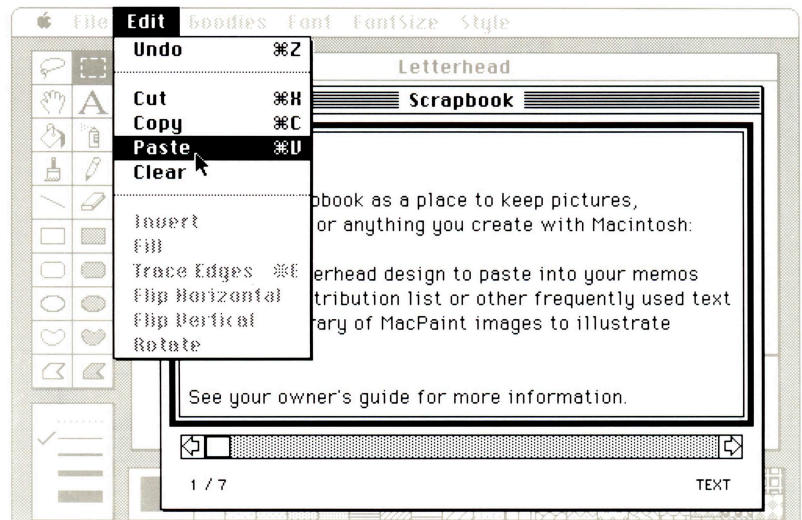
- Choose Cut or Copy from the Edit menu.

Choosing Cut removes the original; choosing Copy just copies it. What you selected is placed on the Clipboard, where it remains until you next choose Cut or Copy.

- Choose Scrapbook from the Apple menu.

- Choose Paste from the Edit menu.

The image is pasted in front of the current image in the Scrapbook. The text on the bottom-left tells you the position this image has in the Scrapbook. The text on the bottom-right tells whether the image is text or a picture and, if it’s from a document rather than a desk accessory, which application the image came from. You can use the scroll bar to look through the Scrapbook. (See “Scrolling” earlier in this chapter.)





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## To move or copy an image from the Scrapbook to a document

- Open the Scrapbook and make it active.
- Scroll to the image you want to move or copy. (See “Scrolling” earlier in this chapter.) The current image is automatically selected.
- Choose Copy from the Edit menu.

The image remains on the Clipboard. Choose Copy if you want to keep the image to use again later.

OR

- Choose Cut from the Edit menu.

The image is removed from the Clipboard. Choose Cut if you won't need to use the image again.

- If necessary, open the document you want to add the image to. If the document is already open, just click in it to make it the active window.
- Select where you want to paste the image.
- Choose Paste from the Edit menu.

The image is pasted into the document.

---

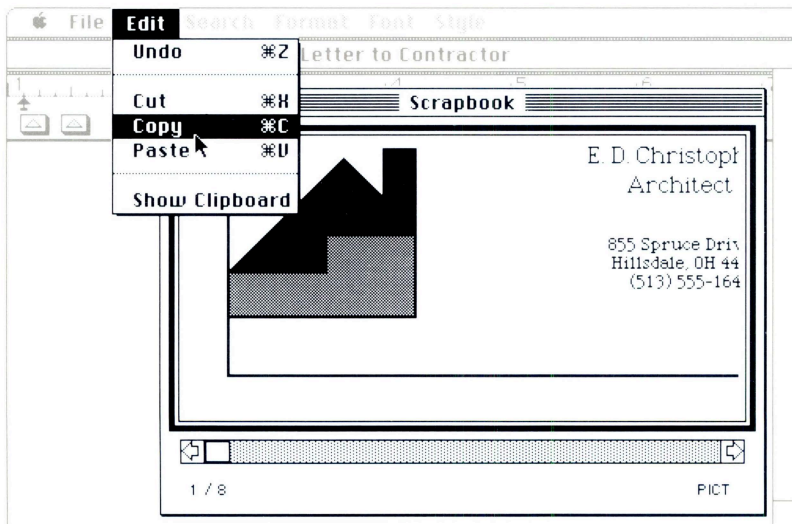
## To remove an image from the Scrapbook

- Open the Scrapbook and make it active.
- Scroll to the image you want to remove. (See “Scrolling” earlier in this chapter.)

Whatever you see in the Scrapbook is automatically selected when the Scrapbook is active.

- Choose Clear from the Edit menu.

The image is removed from the Scrapbook.



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## Using the Finder to manage documents, folders, and applications

This section summarizes how to use the Finder to manage your documents, folders, and applications—how to copy, move, discard, rename, lock, or just rearrange them. It also includes a summary of how to manage your documents when you're using an application. It shows you how the folders you create in the Finder appear when you're saving and opening documents within applications.

How you organize your work in directory windows is up to you. You can “nest” folders one inside the other to create as many hierarchical levels as you want, and you can view the contents of each folder in whatever arrangement gives you the information you want—by icon (two sizes), name, date, size, or type. Choosing a different view from the View menu instantly rearranges the active directory window in the view you choose. For example, you can quickly see which document is taking the most space or which is the latest version of a report you're preparing.

The desktop itself is always arranged by icon.

You can do any of your desktop work with the directories in any arrangement, and you can have different directories in different arrangements at the same time. Every item in a directory is represented by an icon, no matter what arrangement you have the directory in. In any of the text views, the icon is small and appears to the left of each name. You can click, double-click, drag, or Shift-click this icon just as you would its counterpart in an icon view of the directory.

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## Creating a new document

You create a new document by opening the application you want to use.

When you're already using an application, you can create more documents by choosing New from the File menu. See "Summary of Managing Documents Within an Application" later in this chapter.

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**1. Select the icon that represents the application you want to use.**

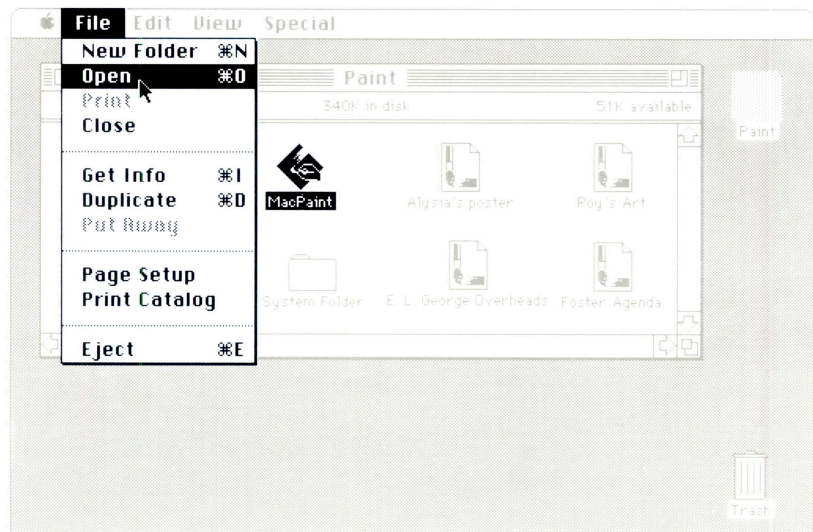
If necessary, insert the disk that contains that application, open the disk icon and any folders you need to, and scroll until you see the application icon.

---

**2. Choose Open from the File menu.**

The appropriate application starts, and a new, untitled document appears; you'll name it the first time you save it.

You can also double-click the icon to open it.





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## Opening an existing document

You open an existing document from the Finder by opening the icon that represents the document you want to work on. The application you'll use with that document starts automatically.

You can also open an existing document while working in an application. See "Summary of Managing Documents Within an Application" later in this chapter.

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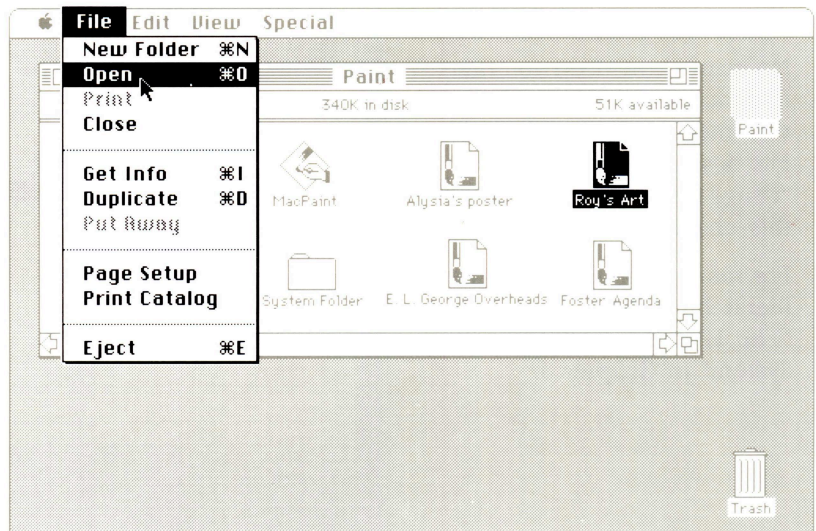
**1. Select the icon that represents the document you want to work on.**

If necessary, insert the disk or disks that contain that document and the application you used to create it, open the disk icon and any folders you need to, and scroll until the document icon is visible.

---

**2. Choose Open from the File menu.**

You can also double-click the icon to open it.



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## Using folders

Folders let you create a hierarchy of system files, applications, and documents so you can arrange your work in whatever way you want and get at what you need quickly.

If you work with just a few applications and a moderate number of documents, you might find it easier not to nest many levels of folders within folders. It's easier to see everything that's on a disk without having lots of folders to rummage through. But if you have many documents, and especially if you have a hard disk, folders help you get rid of clutter you're not interested in at the moment, and they greatly speed up access to what you do want.

No matter how deep you nest folders, you can always find a document by using the Find File desk accessory. See "Using Find File" earlier in this chapter.

For more information on the hierarchical file system, see "The Hierarchical File System" in Chapter 4.

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## To create a new folder

- Choose New Folder from the File menu.

A folder named *Empty Folder* appears in the active window. You can rename it by typing.

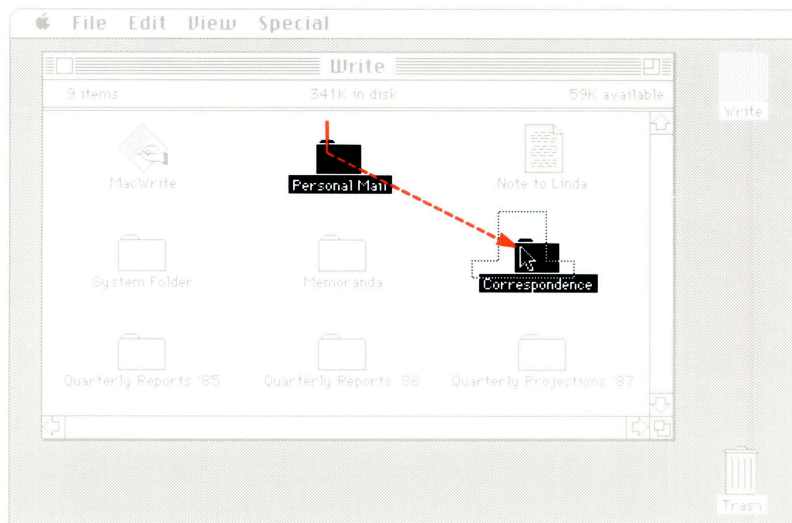
---

## To place a folder and its contents inside another folder

- Drag the folder to the folder icon or window you want it in.

The folder you drag and its contents are placed inside the folder you drag to. If the folder you drag to is on a different disk, the folder is copied rather than moved.

If the folder you drag to already contains a folder with the same name, you'll be asked whether you want to replace the existing folder. Clicking OK replaces the existing folder and its contents with the new folder and its contents, whether or not the folders' contents include duplicate names.



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**To move a document, folder, or application from one folder to another**

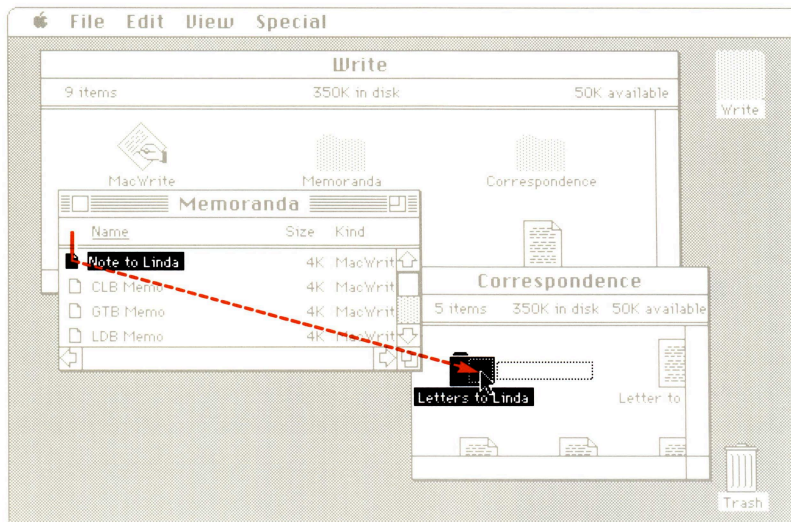
- Drag the item you want to move from the folder it's in to the folder icon or window you want to move it to.

If the folder you're moving the item to is on a different disk, the item is copied, rather than moved, to the new folder. If the folder already contains an item with the same name, you're asked if you want to replace the existing item.

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**To use folders within an application**

See “Summary of Managing Documents Within an Application” later in this chapter.





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## Renaming

You can rename a document, folder, application, or disk whenever its icon is visible in the Finder.

You can also use the Save As command within an application to save a document with a different name. See “Summary of Managing Documents Within an Application” later in this chapter.

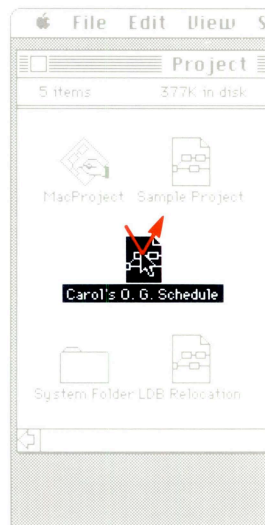
---

### 1. Select the icon that represents what you want to rename.

If necessary, insert the disk that contains what you want to rename, open the disk icon and any folders you need to, and scroll until you see the icon.

You need to click on an icon or its name to rename it, even if the icon is already selected. (This prevents your renaming something when you didn't

intend to.) There are a couple of exceptions: when you create a new folder by choosing New Folder from the File menu, or when you duplicate an item on the same disk or copy it to a different disk, typing renames whatever is selected without your having to click on it.



---

## 2. Type the new name.

Use names that will help you identify the contents; the more specific the name, the better. Document and folder names can be up to 31 characters long (though a name that long would be a little unwieldy when you drag its icon around), and disk names can be up to 27 characters. You can use any

character you can type on the keyboard, except a colon (:). The name cannot begin with a period (.). You can use uppercase or lowercase letters and put spaces between words.

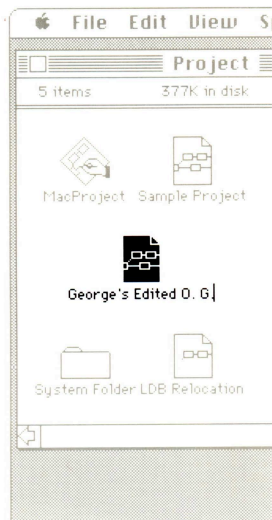
The selected text (the old name) is replaced by the new text you type.

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## 3. Or use the Edit menu to edit the text.

See “Editing Text” earlier in this chapter.

- Write the name of the disk on the disk label. That way, when the computer asks you to insert a specific disk, you’ll know which one it needs.
- Write the names of the disk’s documents on its label, too, so you can tell at a glance what documents a disk contains. (You’ll be glad you did this when you have a lot of disks from which to choose.)



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## Copying a document, folder, or application to the same disk

You can use the Finder to copy a document, folder, or application whenever you can see its icon. You might do this to make a backup copy. (See also “Copying an Entire Disk” later in this chapter.) Or you might want to make a copy of a document to work on without altering the original. For example, you might do this to create forms, letterheads, or templates.

To make a copy of a document while using an application, see “Summary of Managing Documents Within an Application” later in this chapter.

**1. Select the icon that represents the document, folder, or application you want to copy.**

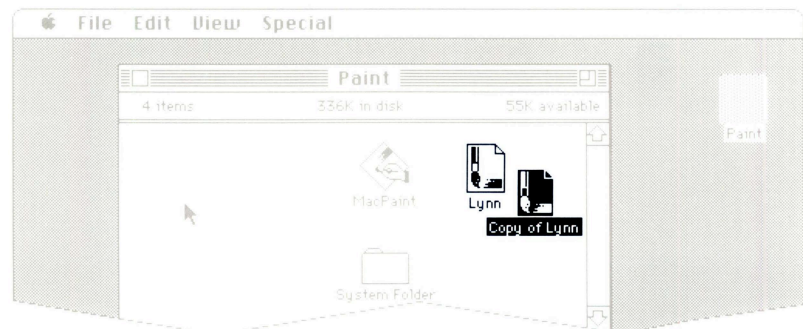
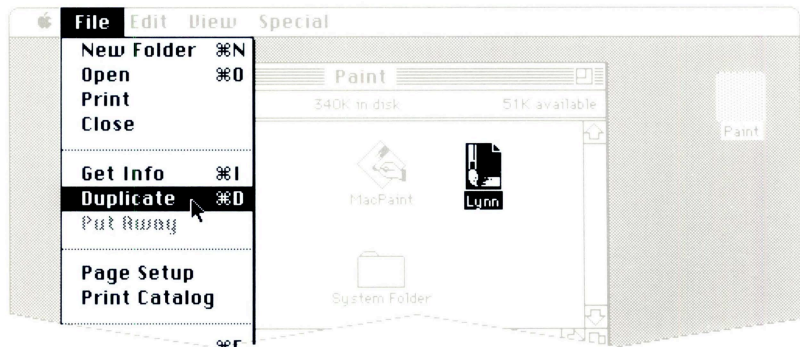
If necessary, insert the disk or disks that contain what you want to copy, open the disk icon and any folders you need to, and scroll until you see the icon.

See “Selecting Icons” earlier in this chapter for how to select more than one icon to duplicate.

**2. Choose Duplicate from the File menu.**

A new icon appears. The duplicate icon has the same name as the original, preceded by the words *Copy of*.

You can drag the duplicate copy to any folder or disk icon or window.





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### 3. Rename the duplicate.

You can rename any duplicate copy of a document or folder by typing immediately after you create the copy. Any other time, you must click the icon that represents what you're renaming before you type the new name. See "Renaming" earlier in this chapter.

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## **Copying or moving a document, folder, or application to a different disk**

You can copy a document, folder, or application to another disk whenever both disk icons—the source disk icon and the destination disk icon—are present on the desktop. The source disk must be opened into a directory window, so you can select the document, folder, or application you want to copy; the destination disk can be either in icon form or opened into a directory window.

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**1. If necessary, insert the disk you want to copy to, so its icon will be present.**

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**2. If necessary, insert the disk that contains what you want to copy.**

If you're using a one-drive system, eject the disk you're copying from before you insert the disk you're copying to.

3. If necessary, open the disk icon and any folders you need to and scroll until you see the icon that represents what you want to copy.

4. Drag what you want to copy to the place you want to copy it.

You can drag it either to a disk or folder directory window, or to an icon that represents the disk or folder you want it to be in.

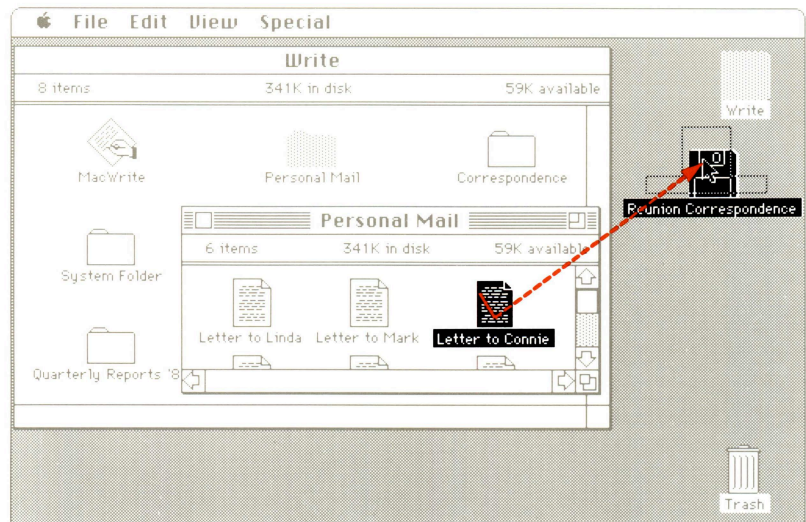
If you drag to a directory window, you can place the icon wherever you want; if you drag to an icon, the Finder places the item in the next available spot. You can also drag to the **hollow icon** that remains behind when you open an icon.

See “Selecting Icons” earlier in this chapter for how to select more than one icon to copy.

If you’re using a one-drive system, the computer will present a series of dialog boxes, asking you to insert alternately the disk you’re copying from and the disk you’re copying to.

If the destination disk already contains an item with the same name, you’ll be asked to confirm that you want to replace the current contents with what you’re copying.

What you copied appears in the window you dragged to. (If you dragged to a disk or folder icon, what you copied will appear in the window when you open the icon.)





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**5. If you're moving rather than copying, drag the original to the Trash.**

Whenever you drag from one disk to another, a copy of what you move is left behind for safekeeping. If you want to reclaim the space on the original disk, you can drag the remaining icon to the Trash. To reclaim the space in memory immediately, choose Empty Trash from the Special menu.

---

## Removing or recovering a document, folder, or application

You can discard a document, folder, or application whenever its icon is visible. You do so by dragging its icon to the Trash. Usually you see the Trash as an icon, but it can be opened into a directory window.

When you put something in the Trash, the Trash icon expands to let you know there's something in it. What you put in the Trash is not immediately gone forever. What you discard can usually be recovered until you empty the Trash by choosing Empty Trash from the Special menu. The trash is automatically emptied when you start an application, eject the disk, or when the Finder needs the space. You can recover a removed document, folder, or application if you can see its icon in the Trash window.

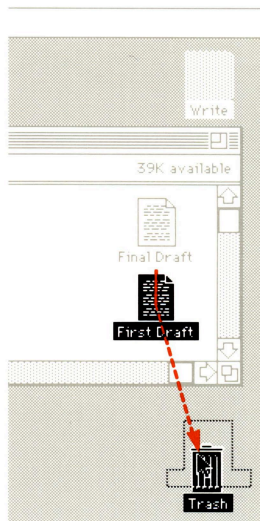
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## To remove a document, folder, or application

- Open the window that contains what you want to remove, and scroll until you see the icon or icons.
- Drag the icon or icons that represent what you want to remove to the Trash icon or window.

You may discard the contents of an entire disk by choosing Select All from the Edit menu and then dragging one of the selected icons to the Trash.

To reclaim the space in memory immediately, choose Empty Trash from the Special menu.



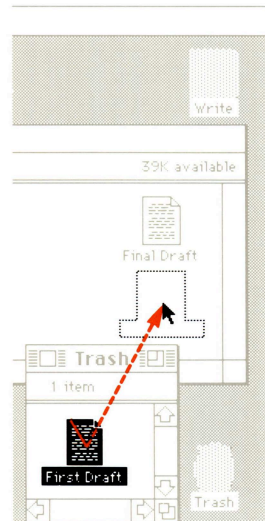
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## To recover a removed document, folder, or application

- Open the Trash window and scroll until you can see the icon that represents what you want to recover.
- Drag the icon out of the Trash window onto the desktop or into another window.

You can recover an item as long as you can see its icon in the Trash window.

If you can't remember where items in the Trash came from, you can select what you want to recover and choose Put Away from the File menu.



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## Locking a document or application

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1. Select the icon that represents the document or application you want to lock.

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2. Choose Get Info from the File menu.

**Locking** a document or application prevents it from being renamed or discarded. Locking a document also prevents saving any changes to it. You can, however, open and print locked documents.

See “Disks” in Chapter 4 for how to lock disks physically.

The Get Info box appears, filled with information about the item.

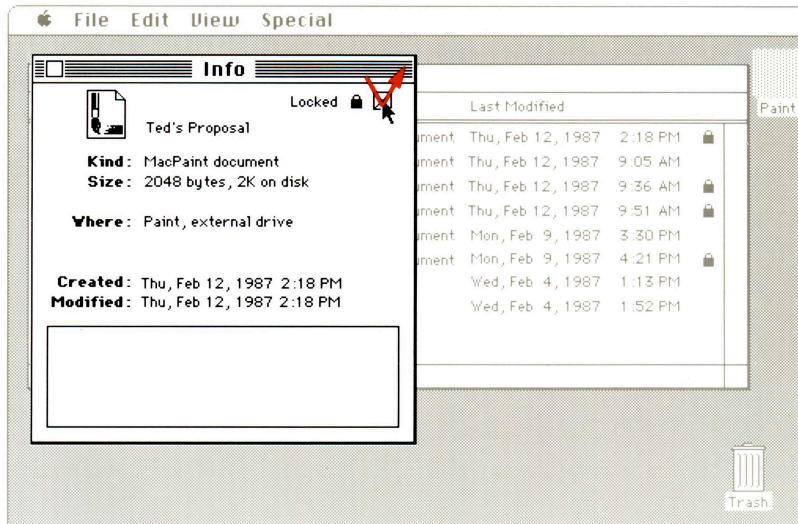


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### 3. Click Locked.

The Locked box is checked.  
You unlock a locked document or application by clicking the checked box.

Directories in text views indicate which of your documents and applications are locked by displaying a small icon on the right.



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## Printing

In the Finder you can print a document, a group of documents, the contents of the entire screen, the contents of the active window, or a disk or folder directory. You can print a document whenever its icon is visible and a disk that contains its application is currently inserted. When you print from the Finder, the document's application is opened automatically.

To print a document while using an application, see "Summary of Managing Documents Within an Application" later in this chapter.

If you use an ImageWriter, make sure that the printer is ready, the select light is on, and the paper is at the top of a form.

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## To choose a printer

- Choose the Chooser desk accessory from the Apple menu.
- See "Using the Chooser" earlier in this chapter.

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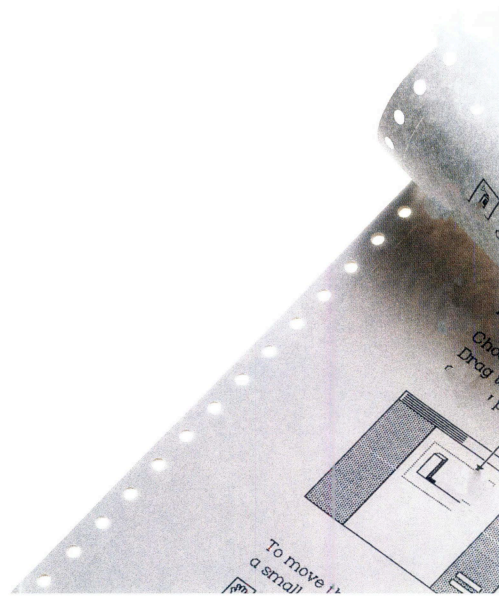
## To print a document from the Finder

- Select the icon that represents the document you want to print.

If necessary, insert the disk or disks that contain the document and the application you used to create it, open the disk icon and any folders you need to, and scroll until you see the document icon.

- Choose Print from the File menu.

One or more dialog boxes might appear, with options for printing your document.



## To print a group of documents

- Select the document icons.

See “Selecting Icons” earlier in this chapter for how to select more than one document to print.

If necessary, insert the disk or disks that contain those documents and the application you used to create them, open the disk icons and any folders you need to, and scroll until you see the document icons.

- Choose Print from the File menu.

The documents will be printed in the order in which they appear in the selection rectangle—from left to right, top to bottom.

## To print the current contents of the entire screen with an ImageWriter

- With Caps Lock down, hold down both the Apple and Shift keys while you press the 4 key.

If you're also pressing the mouse button, the action will start when you release the button.

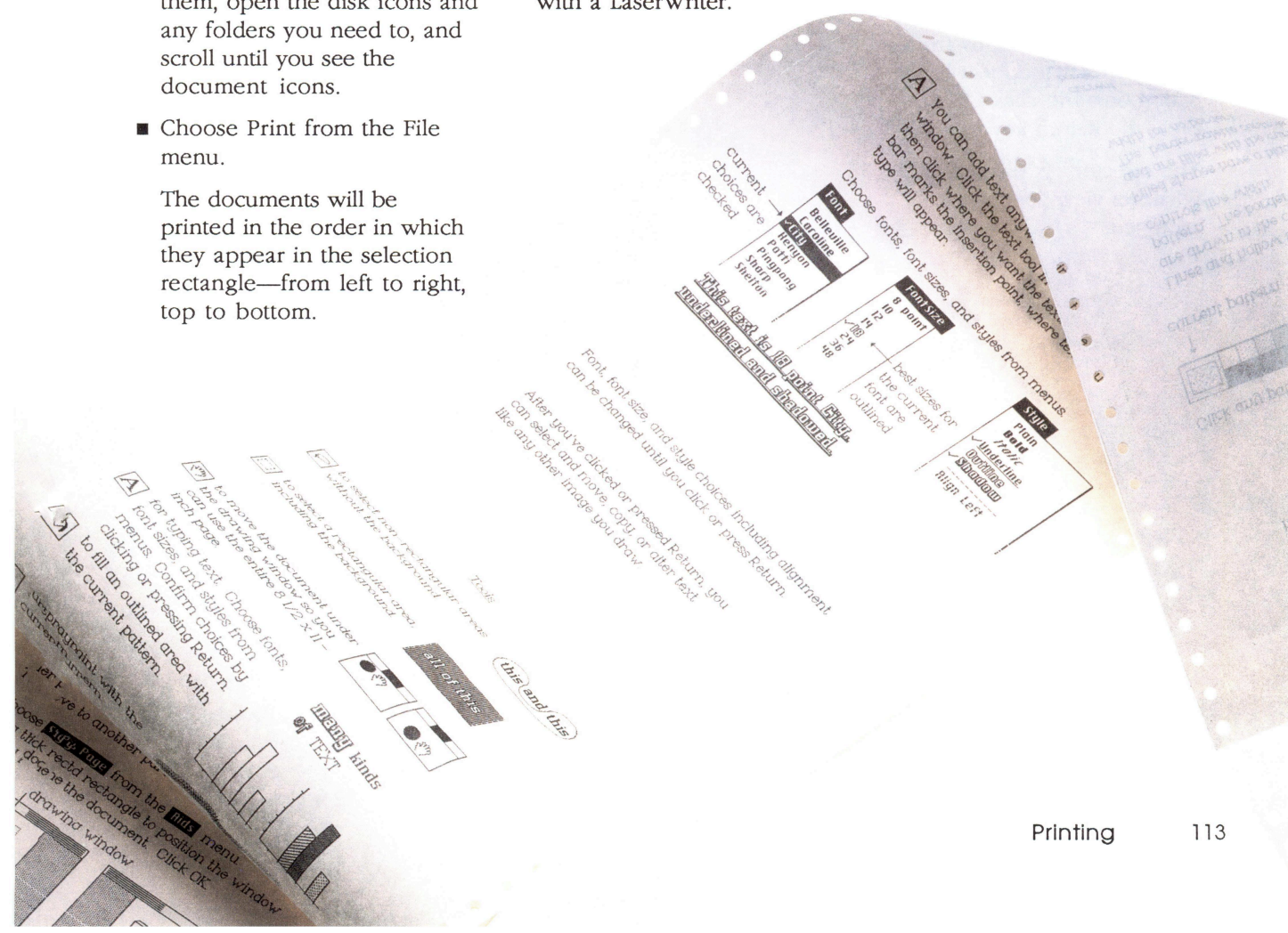
You can't use this method with a LaserWriter.

## To print the current contents of the active window with an ImageWriter

- Hold down both the Apple and Shift keys while you press the 4 key.

If you're also pressing the mouse button, the action will start when you release the button.

You can't use this method with a LaserWriter.



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## To print a disk or folder directory

- In the Finder, select the disk or folder icon you want to print a directory of, or make the directory window active.
- Choose Page Setup from the File menu to set paper size, printing orientation, and other options.
- Choose Print Catalog from the File menu.
- Select printing options from the choices that appear in the dialog box and click OK or press the Return key.

The directory is printed in whatever view you have it arranged.



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## Using the MiniFinder

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### To install what you want to get at quickly in the MiniFinder

The MiniFinder lets you move among documents and applications faster than you can by returning to the Finder each time you want to work with a different application. You might want to install the documents and applications you use most often in the MiniFinder.

You can install the MiniFinder on any of your disks that contain applications, whether or not they're startup disks. The Macintosh SE always starts up with, and applications quit to, any MiniFinder on the current startup disk.

- In the Finder, select what you want to place in the MiniFinder.

You can select up to 12 documents and applications. The documents and applications you select must be in the same directory window; drag them there if necessary. Any applications you need to work on documents in the MiniFinder must be on the same disk, but they don't need to be in the MiniFinder. If you move an application to a different folder after you've installed the MiniFinder, however, the MiniFinder won't be able to find it.

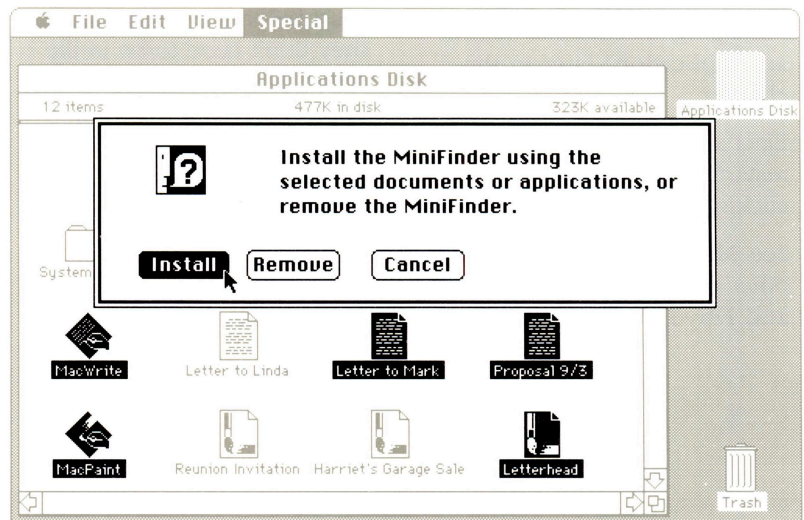
- Choose Use MiniFinder from the Special menu.

If the command is dimmed, check to see if the disk is locked.

- Click Install.

A MiniFinder icon is placed in the System Folder.

The next time you start your Macintosh SE using this disk, or quit an application on this disk, the MiniFinder will appear instead of the usual desktop.



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## To use the MiniFinder

- Open an application or document in the MiniFinder by selecting it and clicking Open or by double-clicking its icon.
- Return to the Finder by clicking Finder or pressing the Enter key.  
Click the Drive button to change drives, if necessary.
- Open other applications on the same or different disks by clicking Open Other.  
A dialog box appears. It's the same dialog box you see when you choose Open within an application, but in the MiniFinder you see and open applications rather than documents. See "Summary of Managing Documents Within an Application" later in this chapter.
- Eject any inserted disks and restart the Macintosh SE by clicking Shut Down.
- See MiniFinders installed on other disks by using the Eject and Drive buttons.

---

## To change what applications and documents are in the MiniFinder

- In the MiniFinder, click Finder.  
Use the Drive button first if necessary.
- In the Finder, select what you want to place in the MiniFinder.  
See "Selecting Icons" earlier in this chapter.  
You can select up to a total of 12 documents and applications.  
The documents and applications you select must be in the same directory window. Drag them there if necessary. Any applications you need to work on documents in the MiniFinder must be on the same disk, but they don't need to be in the MiniFinder. If you move an application to a different folder after you've installed the MiniFinder, the MiniFinder won't be able to find it.
- Choose Use MiniFinder from the Special menu.
- Click Install.

---

## To remove the MiniFinder

- In the MiniFinder, click Finder.  
Use the Drive button first if necessary.
- Choose Use MiniFinder from the Special menu.
- Click Remove.  
Dragging the MiniFinder icon to the Trash also removes the MiniFinder.

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## Summary of managing documents within an application

You can do quite a lot of document management without leaving an application you're using. You can open documents, close them, save them, and print them. And you can organize your work using the same folders you create in the Finder.

Usually when you choose Open or Save As within an application, you can see the names of folders you created in the Finder.

---

### To create a new document

- If necessary, save any unsaved changes and then choose Close from the File menu to close the current document.

With some applications, you can have just one document open at a time.

- Choose New from the application's File menu.

A new document appears. In most applications, you name the document the first time you save it; in a few applications, you must name the document as soon as you create it.

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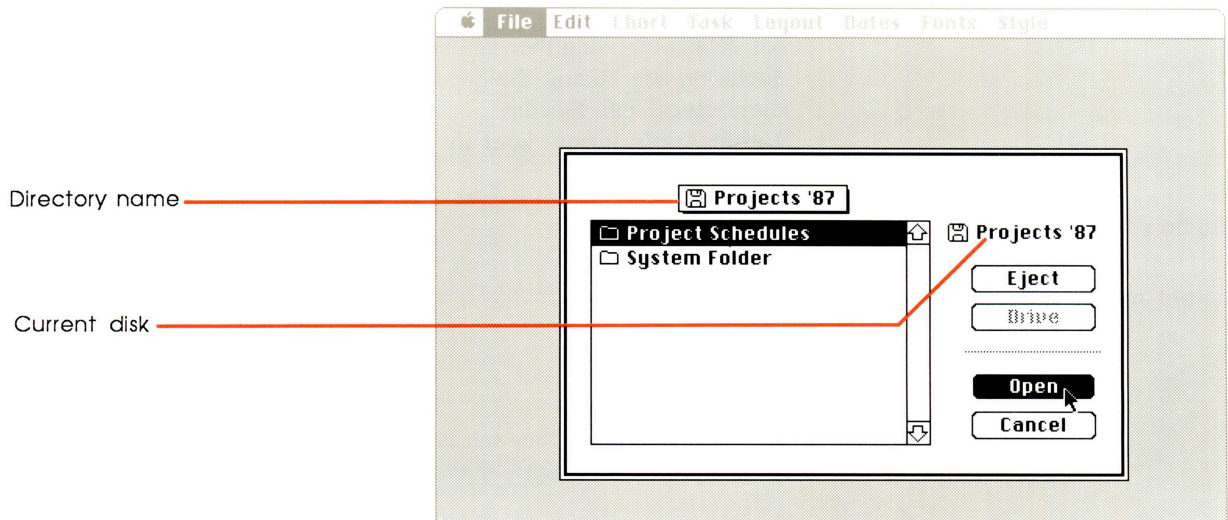
### To open an existing document

- If necessary, save any unsaved changes and then choose Close from the File menu to close the current document.

With some applications, you can have just one document open at a time.

- Choose Open from the application's File menu.

A dialog box appears, with a directory of the current folder or disk. The directory name (and a folder or disk icon) is above the alphabetized list of the directory's contents; the





## To save a document

name of the current disk (and a disk icon) appears to the right.

- To see the contents of a folder in the current directory, select its name and click Open, or just double-click its name.

For details on using the directory, see “Using the Hierarchical File System Within Applications” later in this chapter.

- Open the document you want to work on by clicking its name and then clicking Open (or by double-clicking its name).

- Choose Save from the application’s File menu.

Use the Save rather than the Save As command for routine periodic saving of your document. The Save command saves a document with its original name on the same disk. Choose Save As when you want to save the current document with a different name, or to copy it to a different folder or disk.

If this is a new document that hasn’t yet been saved, you’ll need to name it first before saving it. When you choose Save, you see the same dialog box that appears when you choose Save As. See the next column.

For details on using the directory, see “Using the Hierarchical File System Within Applications” later in this chapter.

## To save a document under a different name, or in a different folder, or on a different disk

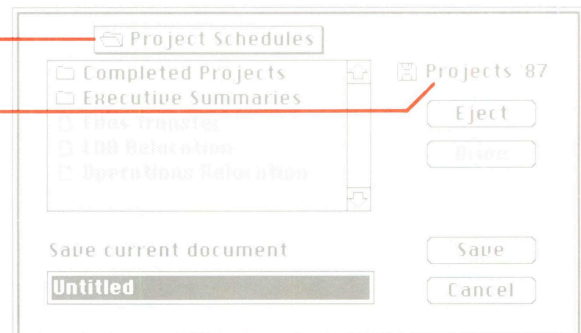
- Choose Save As from the application’s File menu.

A dialog box appears, with a directory of the folders contained on the top level of the disk. The directory name (and a folder or disk icon) is above the alphabetized list of the folders it contains; the name of the current disk (and a disk icon) appears to the right.

- To see the folders inside a folder in the directory, double-click the folder’s name.

Directory name

Current disk





When you're saving rather than opening documents, you see the entire contents of the folder. All items except folders appear dimmed.

- To see folders on other disks, use the Drive and Eject buttons.

Clicking Drive or pressing the Tab key always brings you to the top level of any other disk in another drive.

For details on using the directory, see "Using the Hierarchical File System Within Applications," later in this chapter.

- Type a new name for the document if it's a new document or if you want to change the current name; otherwise it will be saved with the same name.

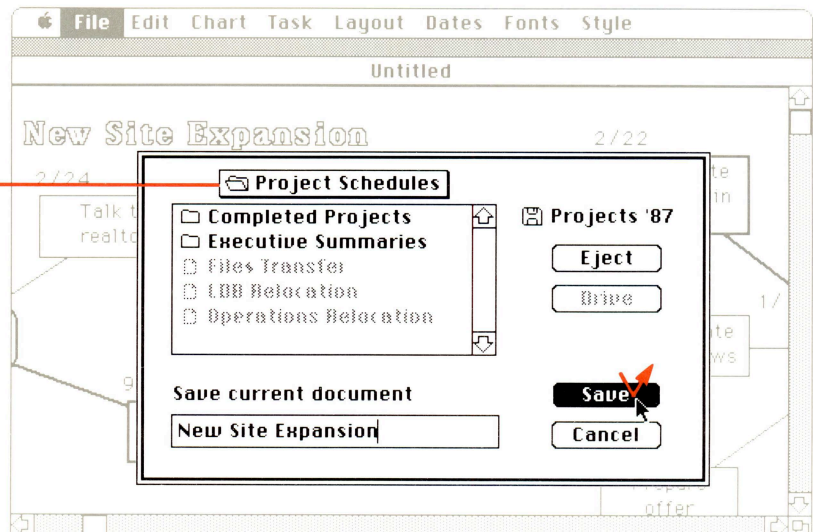
You can use any character or symbol on the keyboard except a colon (:). The name cannot begin with a period (.). You can use uppercase or lowercase letters and put spaces between words. Names can be any length up to 31 characters, but long names can become unwieldy. It's usually best to limit them to the space you have to type them in.

- To save the current document in the folder named at the top of the list, click Save.

You always enter the hierarchy of documents and folders at the place you last opened a document from or saved a document to.

Even though more than one document on a disk can have the same name as long as they're in separate folders, it may be easier to keep track of documents if you give each version a different name.

Directory current document will be saved in



---

## To print a document

- Choose Page Setup from the File menu to set printing options such as page orientation and paper size.

If you use the same setup all the time, you can skip this step.

- Choose Print from the File menu.

In most applications, one or more dialog boxes appear. You can click the various options to control the way your printed document will look. See “Printing” earlier in this chapter for information about printing from the Finder.

If you’re using a printer other than an ImageWriter, if you have more than one printer, or if your printer is attached somewhere other than the Printer port, use the Chooser desk accessory to tell the Macintosh SE which printer to use. See “Using the Chooser” earlier in this chapter.

---

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## Using the hierarchical file system within applications

The hierarchical file system (HFS) lets you organize your folders, documents, and files in ways that make most sense to you. You keep related documents (and, if you want, applications) together in the same folder. You can even subdivide information into separate folders that you keep within other folders. That way, when you need information on a particular subject, you can find it all in the same place.

You can still see the folders you created in the Finder from within other applications. Each time you choose Open, Save, or Save As, a dialog box appears with a directory of folders. Open a folder (which might contain other folders) to see what it contains.

You always enter the hierarchy of documents and folders at the place you last opened a document from or saved a document to.

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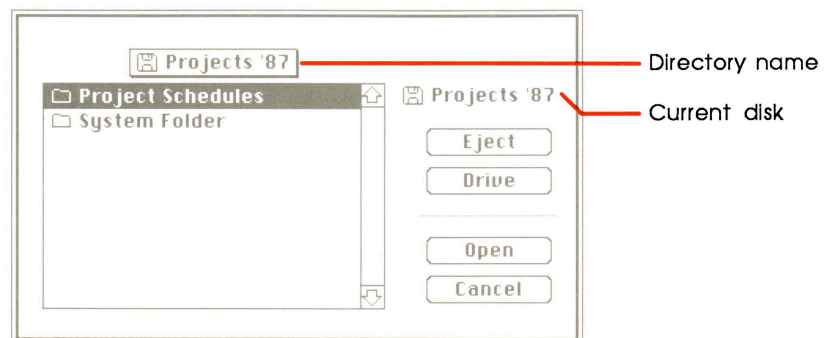
## To see a directory from within an application

- Choose Open, Save, or Save As from the File menu.

A dialog box appears, with a directory of the current folder or disk. The directory name (and a folder or disk icon) is above the alphabetized list of the directory's contents; the name of the current disk and a disk icon appear to the right.

The folders in this dialog box correspond to the folders you create in the Finder. You open them in the same way you open folders in the Finder, by selecting them and clicking the Open button, or by double-clicking the folder's name.

Within applications, folders show only the documents the current application can open, even if the folders contain other documents or applications.



---

### To see the contents of a folder in the current directory

- Select the folder's name and click the Open button, or just double-click its name.

You see the contents (both folders and documents) of the folder you opened. You can move through the entire hierarchy of folders in this same way, opening folders within the currently open folder, until you reach the document you want to open.

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### To trace your way back through the hierarchy of folders

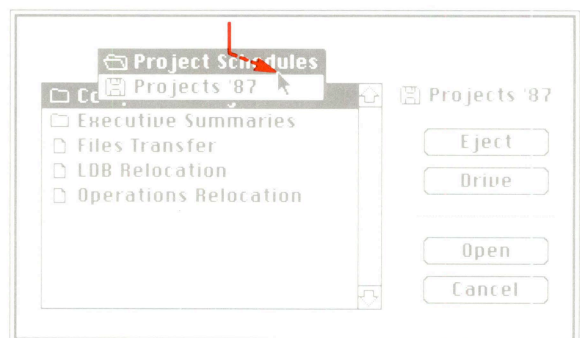
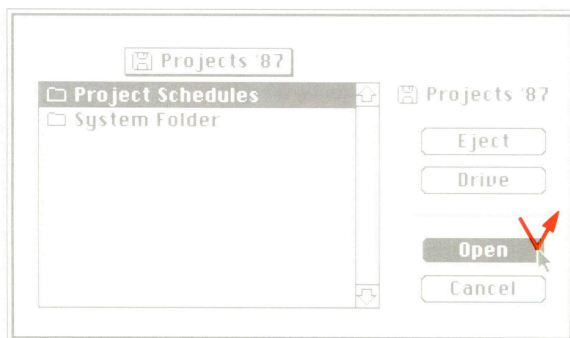
- Press the directory name.

A list appears below the directory name when you press it. Each folder in the hierarchy is in the list, and the disk directory (which includes anything on the disk that's on the desktop or not in any folder) is at the end of the list.

- Choose the folder you want.
- To close the currently opened folder and to drop back to the previous level in the directory, click on the disk name in the upper right corner.

- To see documents and folders on other disks, use the Drive and Eject buttons.

Clicking Drive (or pressing the Tab key) always brings you to the top level of any disk inserted in an alternate drive.





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## Managing disks

You'll use the Finder to manage entire disks as well as the documents, folders, and applications on them. Renaming disks works the same as renaming any icon. See "Renaming" earlier in this chapter.

Chapter 4, "The Macintosh SE: Reference," contains additional information about disks.



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## Initializing 3.5-inch disks

Whenever the Macintosh SE encounters a disk it can't interpret, a dialog box appears and asks whether you'd like to initialize the disk. With 800K disk drives, you have three choices—to initialize the disk with a one-sided format, to initialize the disk with a two-sided format, or to eject without initializing.

To initialize the internal hard disk, see Appendix A. To initialize external hard disks, read the manual that came with the disk.

In general, initialize single-sided (400K) disks one-sided, and double-sided (800K) disks two-sided. (800K disks are marked "Double Sided.") Disks that are initialized one-sided don't show any folders when you use directories within applications (whenever you choose Open or Save As from the application's File menu).

400K disks allow for compatibility with earlier models of Macintosh systems. If you plan to use the same disks on both a Macintosh SE and a Macintosh with a 400K internal disk drive, you'll need to initialize the disk one-sided.

You *can* show folders on 400K disks when you use directories within applications by initializing the disk single-sided and holding down the Option key through the entire initialization process.

Even when you initialize a disk two-sided, you always insert disks in the same way, metal end first, label side up. The disk drive is able to get information from both sides of the disk.

If the uninitialized disk is in an external 400K disk drive, you're offered just two choices—initialize the disk (one-sided) or eject.

In the Finder you can also initialize disks that have information on them by choosing Erase Disk from the Special menu. This erases everything on the disk and gives you the same initialization choices you get with a new disk.

You can initialize disks from within an application without losing any information in memory, so you can initialize them as you need them.



---

## To initialize both sides of a double-sided disk

- Insert a double-sided (800K) disk you want to initialize.

You see a dialog box.

- Click Two-Sided.
- Type a name for the disk.

To avoid confusion, be sure to give disks different names.

Initializing two-sided installs the hierarchical file system that lets you use folders within an application as well as in the Finder. Whenever you choose Open or Save As or save an untitled document while you're in an application, you'll see and be able to use the same folders you use in the Finder. See "Using Folders" and "Summary of Managing Documents Within an Application" earlier in this chapter.

Once you've initialized a disk with the two-sided format, you can't use it in a 400K disk drive because the 400K disk drive won't be able to read it. You'll be asked if you want to initialize the disk, and clicking Initialize will erase everything on the disk.

Never initialize a single-sided disk with the two-sided format. The second side of the disk has not been tested for reliability, and you could lose all the information on the disk.

---

## To initialize a disk so you can use it in a 400K disk drive

- Insert the disk you want to initialize.

You see a dialog box.

- Click One-Sided.
- Type a name for the disk.

To avoid confusion, be sure to give disks different names.

You can initialize an 800K disk one-sided. This will let you use the disk in a 400K disk drive; however, it makes only half the disk space available to you, and it doesn't install the hierarchical file system, so you won't be able to use folders from within applications on this disk.

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## Ejecting a 3.5-inch disk

To get information from or save information on a disk not currently inserted, you sometimes first need to eject a currently inserted disk.

If the Macintosh SE needs the ejected disk later, it will ask for it.

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**1. Select the icon that represents the disk you want to eject.**

You can also make the disk directory window active if you've opened the icon.

---

**2. Choose Eject from the File menu or drag the icon to the Trash.**

Dragging a disk icon to the Trash both ejects the disk and removes the icon from the desktop. (The Macintosh SE won't ask for it again.) If you drag the current startup disk to the Trash, the Macintosh SE ejects the disk but doesn't remove its icon.

Choosing Eject usually ejects a 3.5-inch disk (if one's inserted) even if none is selected. The Finder looks for an inserted disk to eject. Choosing Eject with a hard disk icon selected has no effect if the hard disk is the current startup disk. If it is not, the icon disappears and will not reappear until you restart the system.

Choosing Shut Down from the Special menu also ejects any inserted 3.5-inch disks and halts Macintosh operations. (You can either turn off the machine or insert another startup disk and click the Restart button.)



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## Creating a startup disk

The Macintosh SE needs certain information to be able to start up the system. Disks that contain this information (in system files such as System and Finder in the System Folder) are called **startup disks**. A startup disk can be either a hard disk or a 3.5-inch disk (800K or 400K). If your system includes the internal hard disk, you'll use that most often as your startup disk.

If you are using only 3.5-inch drives, you probably won't want all your disks to be startup disks because this information can take a substantial amount of room on a disk.

If you are using a one-drive system, following this procedure in this section requires frequent disk swapping. You may find it more convenient to make a separate copy of the *System Tools* disk, remove any unnecessary printer resources and system files (the Scrapbook File or the

Clipboard File, for example) from the System Folder, and then copy the reduced System Folder onto your application disks. You'll have to reinstall any special fonts and desk accessories after copying the System Folder. See "Copying an Entire Disk" and "Copying or Moving a Document, Folder, or Application to a Different Disk" elsewhere in this chapter.

In the Finder, the current startup disk's icon appears in the top-right corner of the desktop.

See "Startup Disks" in Chapter 4.

---

### 1. Start the Macintosh SE with the *System Tools* disk and open the Installer.

If you're using a one-drive system, first eject the *System Tools* disk by clicking the Eject button before going on to the next step.

---

## 2. Insert a new disk (or any disk that has enough space for a System Folder).

If the disk isn't initialized, you'll be asked if you want to initialize it. See "Initializing 3.5-inch Disks" earlier in this chapter.

---

## 3. Select Macintosh SE Installation and any other printing resources you want and click the install button.

Shift-click to select more than one item in the list.

The Installer checks the disk's available memory before you can click the Install button.

If you intend to use the disk as a startup disk on a Macintosh SE *and* on another model of Macintosh computer, select the Universal Installation instead of Macintosh SE. The Universal Installation requires more disk space, but it lets you use the disk on any model of Macintosh computer.

You can use the Font/DA Mover to customize the disk with the fonts and desk accessories you want to use with it. See the *Macintosh Utilities User's Guide* for information on the Font/DA Mover.

---

## To make a startup disk a non-startup disk.

You may want to turn a startup disk into a non-startup disk (a disk just for storing documents)—especially if you're using a hard disk as your usual startup disk. Here's why: the Macintosh SE always looks in the 3.5-inch drives first for a startup disk, and it will use the first startup disk it finds to start up from. Removing the startup files from the 3.5-inch disks means the system will by-pass the 3.5-inch drives and start up directly from the hard disk.

- Start the system by using any disk other than the one you want to be a non-startup disk.
- Insert the disk you want to change to a non-startup disk.
- Drag the System Folder to the Trash.

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## Copying an entire disk

You can copy an entire disk whenever you can see both its icon (the source disk icon) and the icon of the disk you want to copy to (the destination disk icon).

Give each disk a unique, meaningful name (either when you're asked to name a new disk or after you finish the copying process). If each disk has its own name, it will be easier to keep track of your documents, and you'll know which disk to insert when the Macintosh SE asks you for a specific disk. See "Names of Disks and Documents" in Chapter 4.

---

### 1. Insert both the source disk and the destination disk.

If necessary, first eject any other disk by selecting its icon and choosing Eject from the File menu. If you're using a one-drive system, insert and eject the destination disk, and then insert the source disk.

Start your Macintosh SE using a disk other than the one whose contents you want to replace; you can't replace the contents of the current startup disk.

If the destination disk is a new disk, you'll be asked if you want to initialize it. See "Initializing 3.5-Inch Disks" earlier in this chapter.

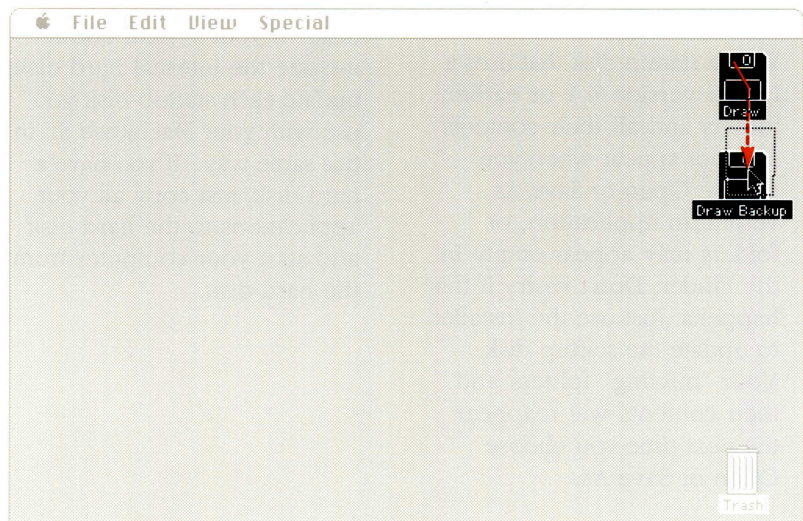
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### 2. Drag the source disk icon to the destination disk icon.

You'll be asked to confirm that you want to replace the existing contents of the destination disk with the contents of the source disk.

The Macintosh SE will tell you if there's not enough room on the destination disk—if you're trying to copy a full 800K disk to a 400K disk, for example.

If you're dragging to a hard disk, the contents of the hard disk aren't replaced. Rather, the contents of the disk you drag to it are added to the hard disk.





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## Using the Installer

You use the Installer to update startup disks and to install resources on startup disks. Printing resources are system files that usually have the same names as the printers themselves. Peripheral devices such as hard disks and file servers also have resources.

It's a good idea to use the Installer to keep all of your startup disks current with the latest system files available. You can see which version of the Finder you're using by choosing About the Finder from the Apple menu. The version number should be 5.4 or higher. Check with your authorized Apple dealer for possible further updates.

With a startup disk that uses a Finder version 4.1 or earlier, folders and all their contents may not appear when you choose Open or Save As within an application, or folders may appear empty in the Finder. Don't worry if this happens. Just use the Installer to update the startup disk. Your "missing" folders and their contents will reappear the next time you choose Open or Save As.

Also, if you don't update, characters you type on your keyboard may produce the wrong results in certain applications. For example, typing "=" may generate ",", instead.

Although the Macintosh SE lets you move items into and out of System Folders just as you can any other folder, leave the System and Finder together in the same System Folder. Use the Installer to keep each of your startup disks current rather than dragging these files among startup disks.

Applications you purchase may not include the latest system files on their startup disks. If your system doesn't include the internal hard disk, update each startup disk you use with your Macintosh SE in this same way. If you have a hard disk, just copy all your applications to the hard disk and start your computer from the hard disk.

If you are using a one-drive system, following this procedure in this section requires frequent disk swapping. You may find it more convenient to make a separate copy of the *System Tools* disk, remove any unnecessary printer resources and system files (the Scrapbook File or the Clipboard File, for example) from the System Folder, and then copy the reduced System Folder onto your application disks. You'll have to reinstall any special fonts and desk accessories after copying the System Folder. See "Copying an Entire Disk" and "Copying or Moving a Document, Folder, or Application to a Different Disk" elsewhere in this chapter.



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**1. Start the Macintosh SE with the *System Tools* disk and open the Installer.**

The Installer is in the Utilities Folder on the *System Tools* disk.

Either select the icon and choose Open from the File menu or just double-click the icon.

---

**2. Insert the startup disk you want to update.**

If you have a one-drive system, first eject the disk that contains the Installer.

The Installer will update the disk named at the top right.

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**3. Select Macintosh SE Installation and any other printing resources you want and click the Install button.**

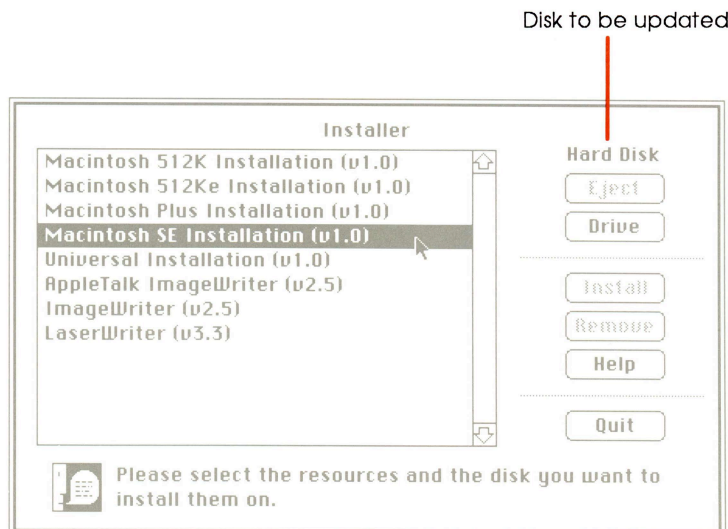
Shift-click to select more than one item in the list.

The Installer checks the disk's available memory before you can click the Install button.

Installing Macintosh SE automatically updates any existing system resources on the disk. You can also select any printing resources you want to add.

If you intend to use the disk you're updating on a Macintosh SE *and* on another model of Macintosh computer, select the Universal Installation instead of Macintosh SE. The Universal Installation requires more disk space, but it lets you use the disk on any model of Macintosh computer.

You can use the Font/DA Mover to customize the disk with the fonts and desk accessories you want to use with it. See the *Macintosh Utilities User's Guide* for information on the Font/DA Mover.











## Chapter 4

### The Macintosh SE: Reference



The first part of this chapter describes the Apple Macintosh SE computer in general. Though some details may change from application to application, this is the way the Macintosh usually works.

The “Finder Reference” and “Finder Menus” sections get specific about the Finder, the application for organizing and managing your documents. This second part of the chapter describes the functions and effects of windows, icons, and menus in the Finder, and also talks a little about the things the Finder manages.

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## What Macintosh SE is: Its parts

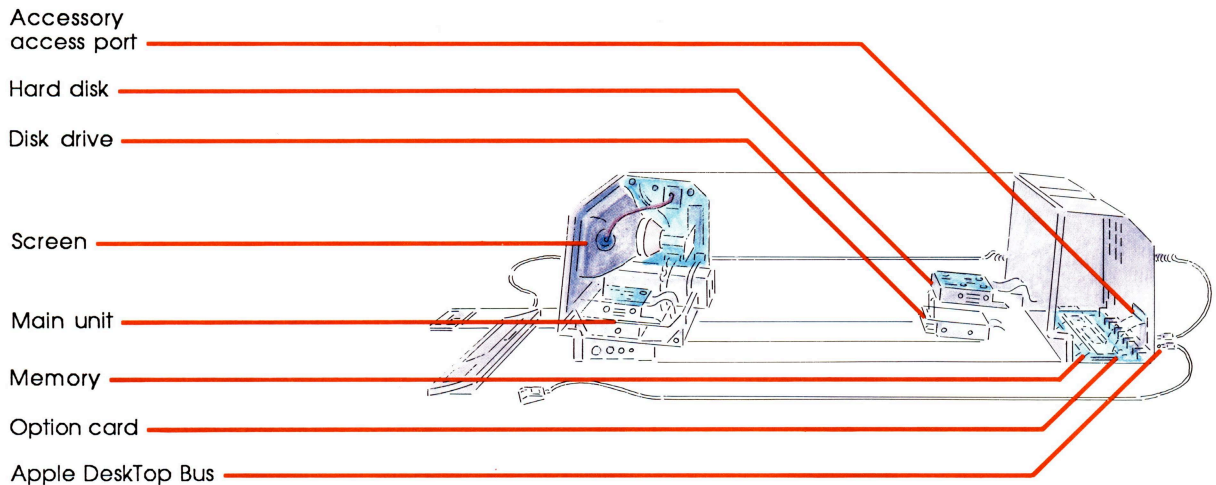


The basic Apple Macintosh SE system includes the main unit, a keyboard, and a mouse. The **main unit** contains a processor, 1 megabyte (1MB) of memory, a built-in 800K **disk drive**, an optional internal **hard disk** or second 800K disk drive, a screen, and an internal **expansion connector**. The processor does the actual work of the computer. **Memory** is where the Macintosh SE stores the information you’re currently using. The Macintosh SE can get this information from either the internal hard disk drive or a 3.5-inch disk in a disk drive. The Macintosh SE can also get information directly from you through the keyboard or the mouse, or from other **peripheral devices** through the **Apple DeskTop Bus**, the **serial ports**, and the **SCSI port**. The screen is where you can see what you’re doing. The expansion connector lets you customize the Macintosh SE with **option cards**. These parts of the Macintosh SE that you can see and touch are called **hardware**.

And then there’s **software**—application programs like MacWrite for words, MacPaint for pictures, MacDraw for structured graphics, MacTerminal™ for electronic communications, or MacProject™ for project management.



You can add to your basic Macintosh SE system as your needs grow, choosing from a large and constantly growing family of Macintosh hardware and software products. See Chapter 5, “Expanding Your Macintosh SE,” for a few ideas.



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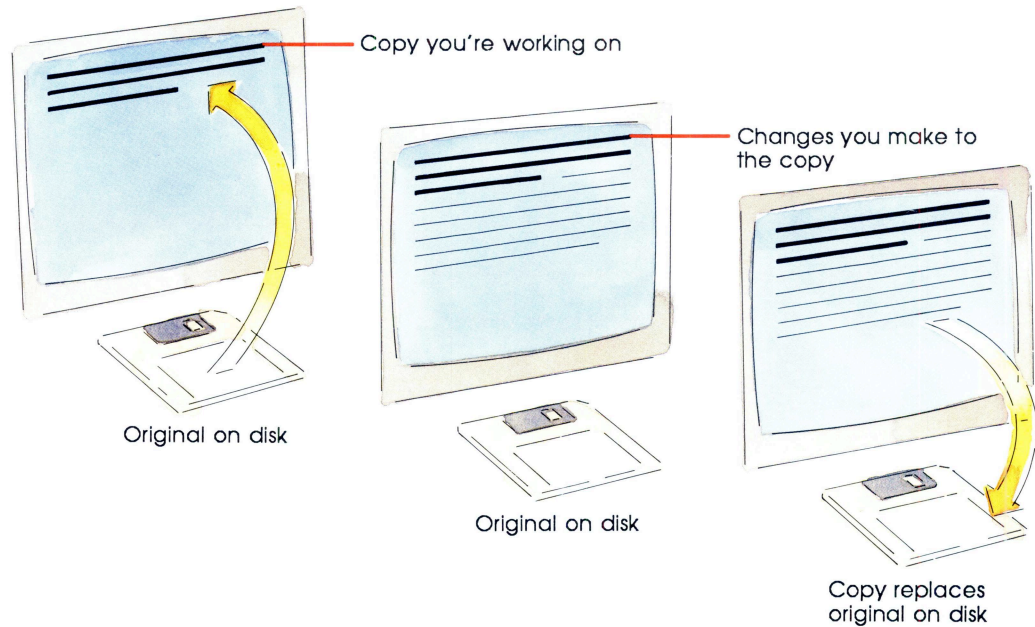
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## Where does your information go?

When you open an existing document so you can revise it (the perfect first draft has yet to be created), the Macintosh SE leaves the original on the disk and makes a copy for you to work on. When you're finished working on the copy, you decide whether you want to keep the new version or not.

If you save the new version with the same name, it replaces the “original” on the disk. If you don't use the same name, with most applications, the original on the disk isn't changed at all. You have the option of saving the new version with the original name, saving it with a different name, or not saving it at all. It's like having an original document and making photocopies of it to edit. When you're satisfied with the changes, you change the original.

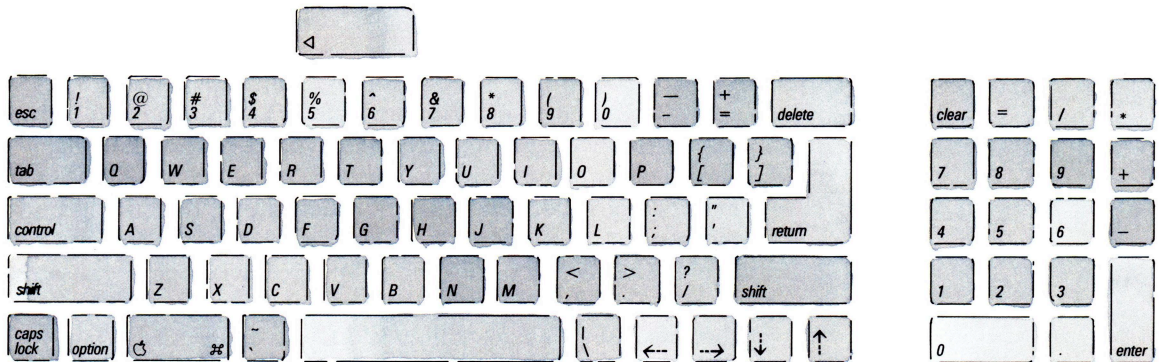
The document in the memory of the Macintosh SE—the version you’re working on—is stored only temporarily. So if you accidentally trip over the power cord, or if the electricity goes off, everything you’re working on—whatever’s in memory—vanishes forever. To count on your work being there when you need it, save it on a disk by choosing Save from the File menu every 15 minutes or so. That way, you’ll never lose more than a few minutes’ worth of work.



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## Keyboard

Macintosh SE keyboards include character keys, numeric keys, direction keys, and other special keys. This section gives a brief description of what the keys do.



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### Character keys

The character keys are just like keys on a typewriter. Use them to type any character, including numbers and symbols such as =, [, and so on. Character keys repeat when held down. Use the Control Panel to set the rate of repeating. See “Using the Control Panel” in Chapter 3.

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### Numeric keys

The built-in numeric keypad lets you enter numbers and numeric symbols more quickly than using the number keys on the main part of the keyboard. It's especially handy when you use the Calculator desk accessory. The numeric keys also include Clear and Enter.



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## Direction keys

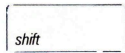
The direction keys (sometimes called cursor keys) let you use the keyboard to move around the Macintosh SE screen in spreadsheet applications and in some word processing applications, for instance, Microsoft Word.

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## Special keys

Some keys on the keyboard are used in combination with character keys to produce different characters, or to provide keyboard shortcuts for commands that you ordinarily use by pulling down a menu. Others perform more specific actions, depending on how the application program is designed to use them. To learn more about how special keys work within specific applications, see the manual that came with the application. For a list of keyboard shortcuts, see “Macintosh SE Shortcuts” later in this chapter.

### Shift key



When the Shift key is held down, character keys produce uppercase letters or the upper character on two-character keys. Sometimes Shift modifies other actions: for instance, in the Finder, holding down the Shift key while you click the mouse button lets you select more than one icon.

### Caps Lock key



The Caps Lock key is a Shift key for letters only. When the Caps Lock key is engaged, letter keys produce uppercase letters, but number and symbol keys aren't affected.

### Option key



Generally, the Option key produces an optional character set of accented and special characters if you hold it down while you press another key. The Option key can be used with Shift, Caps Lock, and the Apple key. For example, the optional characters in the Chicago font are shown in the following illustration.



White = Character produced by holding down the Option key while you type another character.

Red = Character produced by holding down the Option key and the Shift key while you type another character.

You can also use the Key Caps desk accessory to see the optional characters in any other font in the current startup disk's System file. See "Desk Accessories" later in this chapter.

Using the Option key with certain character keys also lets you add accents or diacritical marks to other characters.

Option-`	` grave accent
Option-e	´ acute accent
Option-i	^ circumflex
Option-u	¨ umlaut
Option-n	~ tilde

Type the Option key combination first, followed by the character you want under the mark. If the character can't be accented by the mark, you get the mark followed by the character. Typing the Option key combination twice gives you the accent or diacritical mark alone.

## Apple key

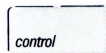


Holding down the Apple key in combination with another key is often a shortcut to choosing a command from a menu. Commands that have Apple key equivalents list them in the menu. Sometimes the Apple key modifies other actions: for instance, holding down the Apple key while typing a period (.) sometimes cancels a long operation in progress—printing, for example.

### Important

The Apple key has two icons on it: one looks like a clover leaf, and the other is an apple. Earlier Macintosh keyboards had just the clover leaf, and many applications refer to this key as the Command key. If your application tells you to press the Command key, this is the key it means.

## Control key



Like the Apple key, the Control key works in combination with other keys to provide shortcuts or to modify other actions. Different applications use the Control key in different ways.

## Return key



The Return key moves the insertion point to the beginning of the next line. In a dialog box, pressing Return is the same as clicking the button that confirms the command (such as OK) or the outlined button if there is one.

## Esc key



Different applications use the Esc key in different ways. See your application's manual for more information.

## Enter key



The Enter key confirms whatever entry (usually text) you've made—an entry typed into a blank to name a document, for example. In a dialog box, pressing the Enter key is the same as clicking the button that confirms the command (such as OK) or the outlined button if there is one.



### Delete key



The Delete key deletes the current selection. If nothing is selected, pressing the Delete key causes the insertion point to back over and delete the text that precedes it.

### Tab key



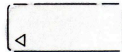
Pressing the Tab key moves the insertion point horizontally to the next stopping place (such as a tab stop). In dialog boxes, pressing Tab usually selects the next place to supply information.

### Clear key



Pressing the Clear key deletes the current selection, just as the Delete key does. In some applications, the Clear key may have other functions.

### Reset key



Different applications use the Reset key in different ways. See your application's manual for more information.

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## Disks

Disks store information; they come in different sizes and shapes. The next few sections apply mostly to 3.5-inch disks. Hard disks are discussed in detail in Chapter 5, "Expanding Your Macintosh SE"; and in "Initializing the Internal Hard Disk" in Appendix A.

Apple 3.5-inch double-sided disks store 800 kilobytes, or about 160 pages, per disk. (Double-sided disks are labeled "Double Sided.") Some space on each disk is used for keeping track of the disk's contents. This is where its directory information is actually stored. The amount of space used for the directory depends on how much information is on the disk.

---

## Initializing disks

Before your Macintosh SE can get information from or save information on a disk, it needs to be **initialized** in a format the computer understands. (A blank disk is like a parking lot without divider lines. Before it can “park the cars,” your Macintosh SE has to “paint in the white lines.”) Any time you insert an uninitialized disk or any disk your Macintosh SE can’t read because it’s damaged or initialized for a different kind of computer, a message appears, asking if you’d like to initialize the disk for the Macintosh SE, and whether you want to initialize the disk on one side or both sides.

The Macintosh SE 800K internal disk drives (and the Apple 3.5 Drive) can read disks initialized with either a one-sided or two-sided format. If you’re using 800K disks, you’ll usually initialize them with a two-sided format. This gives you the full 800K of space on the disks, and it also gives you the hierarchical file system, which lets you use folders within applications as well as in the Finder. The one-sided format gives you a “flat” file system, where folders don’t show up within applications. (See “Disks” later in this chapter.)

But you aren’t limited to using only 800K disks or to initializing disks with a two-sided format. You can use 400K disks as well as 800K disks with your Macintosh SE. Or you can initialize 800K disks with a one-sided format so you can use them in a 400K disk drive.

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### Warning

Be sure to initialize 400K disks one-sided only. Although the Macintosh SE will sometimes let you initialize a 400K disk two-sided, the second side of the disk has not been tested for reliability, and you could lose all the information on the disk.

You can’t use an 800K disk in a 400K disk drive if you’ve initialized it two-sided. In this case, a dialog box asks if you want to initialize the disk with a format it can read. Clicking Initialize erases all the information on the disk.

---

It’s fine to use a combination of one-sided and two-sided, 400K and 800K disks. You’ll notice the difference between one-sided and two-sided formats whenever you choose Open or Save As within an application. With disks formatted on one side only, you won’t see folders. With disks formatted on two sides, you’ll see the same folders you create in the Finder.

Disk	400K disk drive	800K disk drive
400K disk initialized one-sided	yes	yes*
400K disk initialized two-sided	no	no <sup>†</sup>
800K disk initialized one-sided	yes	yes <sup>‡</sup>
800K disk initialized two-sided	no	yes

\* You may want to copy applications from 400K disks to two-sided 800K disks. Some applications, however, may be copy-protected. You can continue to use these applications from one-sided 400K disks.

<sup>†</sup> 400K disks are certified on one side only.

<sup>‡</sup> 800K disks can be initialized one-sided, but you'll be able to use only 400K on the disk, and you won't see folders within applications on this disk.

You can initialize disks while you're using an application without losing any information in memory.

You can also initialize disks that have information on them by using the Erase Disk command in the Special menu in the Finder. This erases everything on the disk.

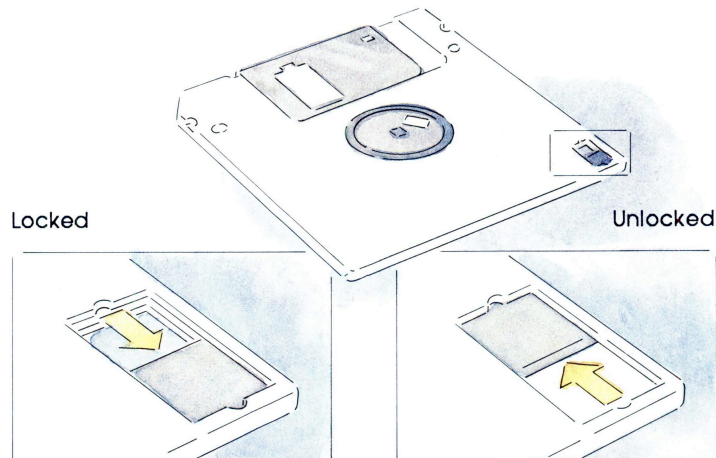
You can copy a 400K disk to an 800K disk and gain the extra 400K for storing your folders and documents.



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## Locked disks

You can prevent information on a 3.5-inch disk from being changed by sliding the small tab toward the edge of the disk to expose the little hole. This is called **locking** a disk. (You can lock documents and applications by choosing Get Info from the File menu. See “Locking a Document or Application” in Chapter 3.)



When a disk is locked, you can't add new information to it or change any information on it. You can open (and perhaps print) the documents it contains, but you won't be able to save, delete, rename, move, duplicate, or change any information on it.

To allow the disk to be altered again, slide the tab to cover the hole.

❖ *By the way:* Some applications may not work with a locked disk, and the Finder can't reconstruct anything you've done on the desktop when you're using a locked disk. Some desk accessories may not work properly if the current startup disk is locked.

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## Names of disks and documents

Every disk, document, application, and folder has a name. You name disks when you initialize them; you name documents when you save them for the first time; and you usually name folders when you create them. You can change a name at any time with the Finder.

There are a few restrictions to the names you can give. A disk name can contain up to 27 characters; a document or folder name can contain up to 31 characters.

A name can't contain a colon (:) and shouldn't begin with a period (.). Other than that, you can use any characters you can type on the keyboard.

With the Macintosh SE, you can have multiple documents or folders with the same name as long as they're in separate folders and the disk is initialized two-sided. You can't have two items with the same name in the same folder. Your Macintosh SE doesn't distinguish between uppercase and lowercase letters, so *saturday* and *Saturday* are considered the same.

It's best not to give documents the same name as applications. If you move a document named *MacWrite* to a folder that has the MacWrite application in it, you'll be asked if you want to replace the existing MacWrite. Clicking OK will discard the application.

It's a good idea to keep disk names different, too. Sometimes the Macintosh SE will ask you for a specific disk by name, and it's confusing to have more than one disk with that same name. Your Macintosh SE can be quite picky about which one it wants.

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## Startup disks

The *System Tools* disk that came with your Macintosh SE contains system files the Macintosh SE needs to get itself started. Disks that contain these files are called **startup disks**.

These system files are originally stored in a System Folder, and it's a good idea to keep them there.

A startup disk always includes at least a System file and a Finder. It also usually includes at least one printing resource, such as the ImageWriter, AppleTalk ImageWriter, or LaserWriter file on the *System Tools* disk. You may also find other system files on a startup disk—Scrapbook File, Clipboard File, and so on. These files contain information that's used only by certain applications and desk accessories.

Besides giving the Macintosh SE the information it needs to get itself started, the system files on the startup disk determine

- which fonts you have available when you use an application (they're in the System file on the startup disk you're using)
- which desk accessories are in the Apple menu (they're also in the System file)
- what's in the Scrapbook desk accessory (whatever's in the Scrapbook file on the startup disk)
- which version of the Finder you're using
- which devices can be controlled by the Control Panel

You'll probably want to use the Installer on the *System Tools* disk to update the system files on your application disks. It's always a good idea to use the most current versions of Macintosh system software. See "Using the Installer" in Chapter 3 for instructions on updating startup disks.

If your system includes the internal hard disk, you can use the hard disk as your startup disk and avoid updating applications disks. See "Arranging Your Work on Disks" later in this chapter.

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## Customizing startup disks

You can use the Font/DA Mover (Font and Desk Accessory Mover) to customize the System file on startup disks so it contains the fonts and accessories you want available when you use applications with that disk. Applications you purchase may already be customized with fonts or accessories suited to that particular application. The Font/DA Mover lets you copy these to any other startup disk as well. See the *Macintosh Utilities User's Guide* for instructions on how to use the Font/DA Mover.



You can also customize a startup disk by dragging to it other system files such as the Scrapbook or Clipboard file—to have different Scrapbook contents available from time to time, for example.

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## Current startup disk

When you start your Macintosh SE, it looks for a startup disk in the lower internal disk drive. If it finds none there, it looks in the upper internal drive, if one is installed. Next it searches in any external non-SCSI drives (either 3.5-inch drives or external hard disks) connected through the disk drive port. Then it looks for SCSI drives—first for external drives connected through the SCSI port, and then the internal hard disk, if one is installed.

❖ *By the way:* If you have SCSI devices, you can set the order in which they are scanned in the startup process by setting the switches on the devices, and then using the Apple HD SC Setup utility. (The internal hard disk always has a setting of 0.) See the *Macintosh Utilities User's Guide* for more information.

The first startup disk the Macintosh SE finds becomes the current startup disk, the disk whose system files the Macintosh SE is currently using. You can tell which disk is the current startup disk from the Finder. The startup disk's icon is always in the upper-right corner of the desktop.

You can override this scanning order by using the Control Panel and choosing a specific startup device. See “Control Panel” later in this chapter and “Using the Control Panel” in Chapter 3.

The Macintosh SE can switch to a different startup disk while you're working. The disk it switches to becomes the current startup disk.

The Macintosh SE switches to a different startup disk whenever

- You restart the Macintosh SE using a different startup disk. The Macintosh SE follows the normal order in looking for a startup disk.
- You explicitly open an application (not a document) on another startup disk. (If you're using a hard disk as your startup disk, this doesn't cause a switch.)
- You open a document on another startup disk and the original startup disk does not contain the document's application. (If you're using a hard disk as a startup disk, this doesn't cause a switch.)

You can also force the Macintosh SE to switch to a different startup disk when you want another disk to be the current startup disk (if you want to use different fonts or desk accessories, for example), regardless of these other conditions. You can do this in one of the following ways:

- Hold down the Option key while you open an application on the startup disk you want to switch to.
- Hold down the Option and Apple keys while you double-click the Finder icon on the disk you want to switch to.

When you're using the hierarchical file system, all system files must be together in the same folder. See "The Hierarchical File System" later in this chapter.

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## Arranging your work on disks

In general, how you arrange your work on disks depends on your Macintosh SE system—the type and number of disk drives, the printer or printers you're using, and the way you want to organize your work. Macintosh lets you arrange documents, folders, and applications however you want on your disks. See "Copying or Moving a Document, Folder, or Application to a Different Disk" and "Removing or Recovering a Document, Folder, or Application" in Chapter 3.

You do need to start your Macintosh SE by using a startup disk, and you'll probably want an application on that disk or a disk in a second disk drive. Of course, the bigger your Macintosh SE system, the more flexibility you have.

- If you're using a hard disk and the internal drive, you can keep everything on the hard disk—system files, applications, folders, documents—and use 3.5-inch disks just to get information on or off the hard disk or to exchange information from one Macintosh system to another.
- If you're using a two-drive system, you might decide to keep more than one application on a startup disk in one of the 3.5-inch disk drives and keep documents you create with those applications on non-startup disks in another disk drive. It's a good idea to keep about 50K available on your startup disks. (Check below the title bar in the disk directory window for the amount of space available.) Applications usually need a little working space on the current startup disk, even if the document you're working on is on another disk.

With the internal hard disk, you've probably got all the space you need. If you don't have a hard disk and you need more space on your startup disks, you can keep a startup disk in one drive and keep your applications together with their documents on non-startup disks in another drive.

There are a couple of other things you can do to save space on a startup disk:

- Drag any printing resources you don't need to the Trash. For example, if you use an ImageWriter without AppleTalk, you can drag the AppleTalk ImageWriter and LaserWriter files to the Trash.
- Use the Font/DA Mover to remove fonts or desk accessories you don't need from the disk's System file. See the *Macintosh Utilities User's Guide*.

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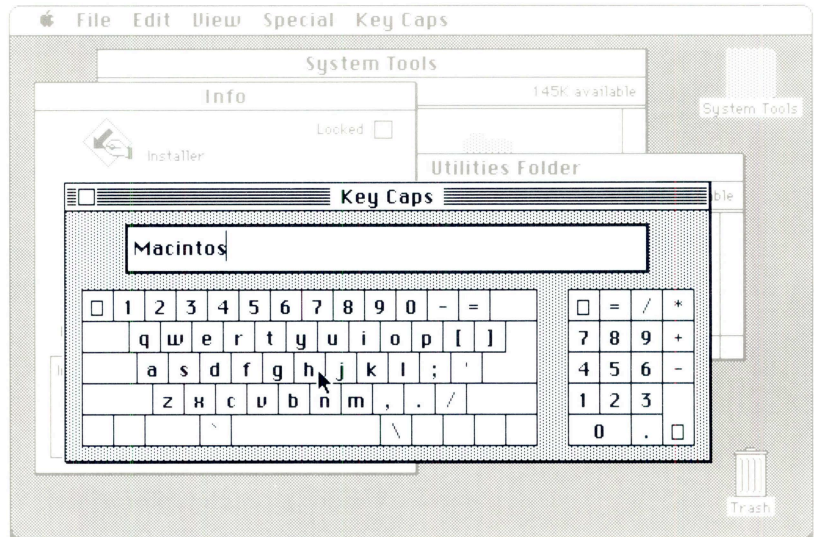
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## Windows

Windows present information. You can have multiple windows on your desktop so you can view more than one windowful of information at the same time. Most windows can be moved, changed in size, scrolled through, or closed. They can also overlap each other. When more than one window is open, one is frontmost, and that's where all the action happens. Clicking anywhere in a window brings it to the front and makes it active.



Although a window may be “buried” under others, it cannot be dragged completely off the screen or made so small that you can’t see it.



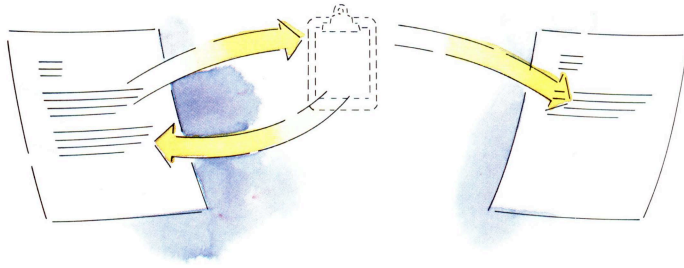
Windows may behave a little differently within an application. See each application’s manual for an explanation of windows in that application.

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## Clipboard: Cutting and pasting

You can move information within a document, among documents created with the same application, among documents created with different applications, or among desk accessories and documents. The information you’re moving or copying is held on the Clipboard. The Cut, Copy, and Paste commands in the Edit menu let you move information between the Clipboard and the active window. Most applications have a Show Clipboard command in their Edit menu that shows you the current contents of the Clipboard.



Within an application, the contents of the Clipboard keep attributes such as text sizes and styles and any information unique to that application. When moving between applications, usually only the text or the picture, in a fixed format, is transferred.

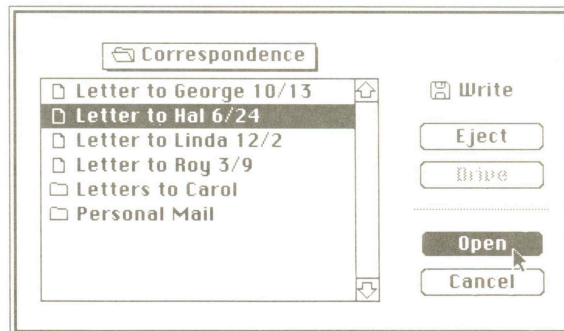
The Clipboard contents are kept in the Macintosh SE memory, if possible. If the contents grow too large, they are temporarily saved in the Clipboard file on the current startup disk.

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## Dialog boxes

Whenever the Macintosh SE needs more information from you, it displays a dialog box, with buttons to click and sometimes with space for you to type additional information, such as the name for a new document.



If you're about to do something that could cause you to lose information, a message in the dialog box alerts you and asks you to confirm that you want to proceed anyway. In boxes containing these messages, one of the buttons—the “safest” alternative—usually has a bold outline. Pressing the Enter or Return key is the same as clicking the boldly outlined button or the button that confirms the command.

A warning message may be accompanied by one or more beeps. If loud beeps annoy you, use the Control Panel desk accessory to lower the speaker volume. (If you turn the speaker volume all the way off, the menu bar blinks to warn you even more subtly.) See “Using the Control Panel” in Chapter 3.

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## Desk accessories

You choose desk accessories from the Apple menu on the far left side of the menu bar. Desk accessories are available while you're using the Finder or any application.

You can use the Cut, Copy, and Paste commands in the Edit menu to move or copy text or pictures among desk accessories, or to and from a document in another window. See “Editing Text” in Chapter 3.

With most applications, you can keep one or more desk accessories open on your desktop while you work on documents. Like any windows, desk accessories may be obscured by other windows that are made active. The accessories can be made active by clicking them or choosing them again from the Apple menu, and moved by dragging their title bar. You close them either by clicking their close boxes or by choosing Close from the File menu.

With some applications (MacPaint, for example), you need to close desk accessories in order to work on a document.

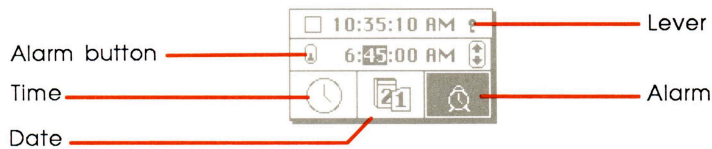
All desk accessories are closed automatically when you open a document or application from the Finder or quit an application.



The Apple menu always contains the accessories that are installed in the System file on the current startup disk. The System file on the *System Tools* disk includes seven accessories: Alarm Clock, Calculator, Chooser, Control Panel, Find File, Key Caps, and Scrapbook. The *Utilities* disk includes two other desk accessories—Note Pad and Puzzle—in a desk accessory file in the Utilities folder. You can add these accessories to any startup disk. See the *Macintosh Utilities User's Guide* for instructions on how to add or remove desk accessories.

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## Alarm Clock



When you choose Alarm Clock, a compact clock displays the hour, minute, and second. To see more, click the **lever** on the right side of the clock. (Click the lever again to go back to the compact clock.) With the lever down, two more panels appear. The lower panel displays icons for Time, Date, and Alarm; the middle panel provides a place to set whatever you select by clicking in the bottom panel.

Set what's currently displayed in the middle panel by clicking the digits you want to change. Arrows appear on the right. Click the up or down arrow to scroll the numbers higher or lower. Or use the keyboard to type the numbers. Click the top panel to set the time.

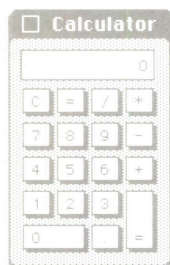
Click the alarm button to set or unset the alarm. Your Macintosh SE beeps when the alarm goes off, and the Apple menu title blinks until you unset the alarm by clicking the alarm button off. Choosing Alarm Clock from the Apple menu also turns the alarm off, but it doesn't unset it.

When the clock is active, the time and date are automatically selected (even though they aren't highlighted), so you can copy and paste them into the document you're working on or into a desk accessory that accepts text.

You can also change the time and date by using the Control Panel. See "Control Panel" later in this chapter and "Using the Control Panel" in Chapter 3.

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## Calculator

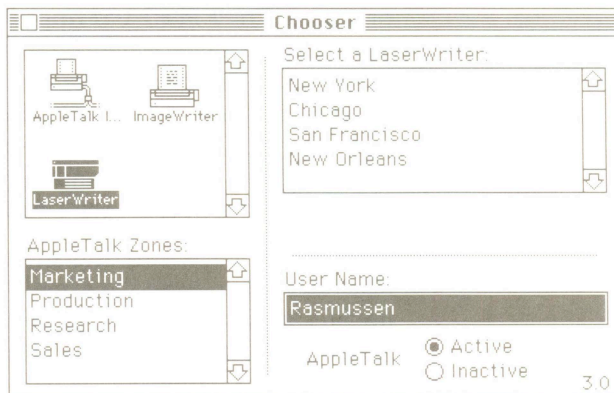


The Calculator works like an ordinary four-function pocket calculator, except that with your Macintosh SE calculator you can copy the calculation results (which are automatically selected) and paste them into any document or another desk accessory. You can also copy numbers from a document and paste them into the calculator's display.

Click the buttons or type on the keyboard. The asterisk (\*) is for multiplication; the slash (/) is for division.

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## Chooser



You can link two or more AppleTalk networks together. In such a system, each network becomes a **zone** on that system. For more information, see “AppleTalk Personal Network” in Chapter 5.

The Chooser lets you choose devices (usually printers) connected directly to the printer port or the modem port, or devices on an AppleTalk network. If you have **zones** on your AppleTalk network, the Chooser lets you scan those zones for devices in them. You also use the Chooser to connect or disconnect the AppleTalk network.

If you’re using an ImageWriter printer exclusively, you probably won’t use the Chooser desk accessory. The Macintosh SE is preset to print documents on any ImageWriter attached to the Printer port whenever you choose Print from the File menu.

You’ll usually use the Chooser when

- ☐ You want to connect or disconnect AppleTalk.
- ☐ You have another printer or you want to use a different port for the ImageWriter. (If you’ve connected AppleTalk to the Printer port, for example.)
- ☐ You want to choose a device on the AppleTalk network. (If you have a LaserWriter or a file server, for example.)
- ☐ You want to choose a device in a different zone on the AppleTalk network. (You choose the type of device you want and then scan the different zones on the network.)

The Chooser lets you use any device for which there’s a resource on the current startup disk. (A resource is a file in the System Folder that usually has the same name as the device itself.)



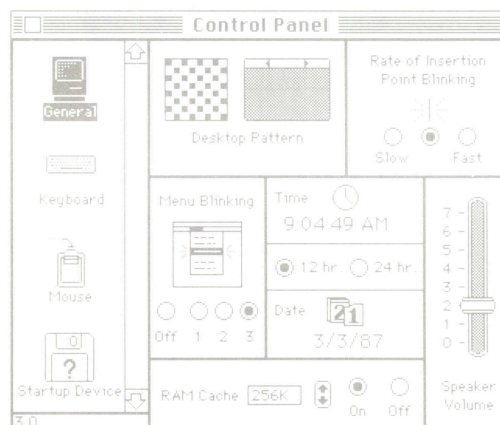
The *System Tools* disk includes printing resources for the ImageWriter (which works with either an ImageWriter or an ImageWriter II), LaserWriter (which works with either a LaserWriter or a LaserWriter Plus) and AppleTalk ImageWriter (which lets you use an ImageWriter II with an installed AppleTalk card on AppleTalk). You can use the Chooser to print on any of these printers. If you use only an ImageWriter connected directly to your computer, you can make more space available on the disk by dragging the LaserWriter and AppleTalk ImageWriter icons to the Trash and choosing Empty Trash from the Special menu.

The Installer lets you update any other startup disks you use with your Macintosh SE to have the same printing software and other system updates included with the *System Tools* disk. (Use the Installer rather than just dragging new resources to a disk.) See “Using the Installer” in Chapter 3.

See “Using the Chooser” in Chapter 3 for instructions on how to use the Chooser.

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## Control Panel



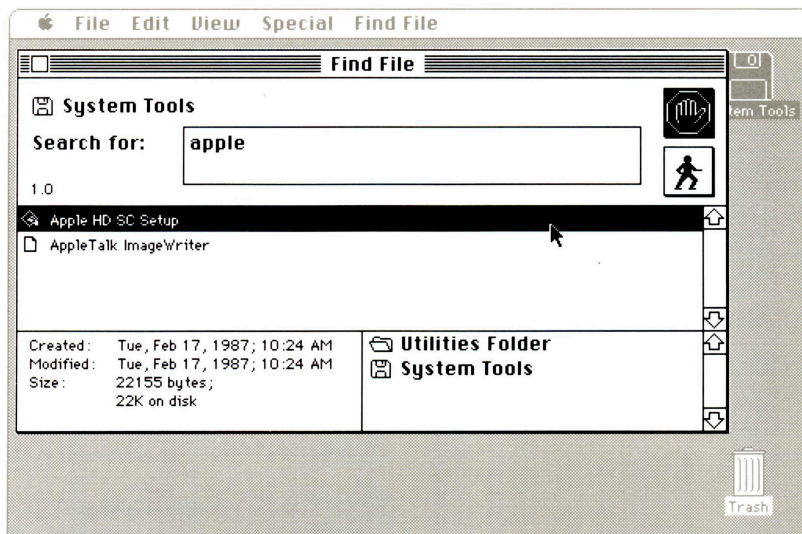
The Control Panel lets you set your preferences for such things as speaker volume, key repeat rate, icon spacing, menu blinking, mouse tracking rate, RAM cache, startup device, and even the background pattern of your desktop. You can also set the system clock, change its display format (12-hour or 24-hour format), and

set the date from the Control Panel. Most Control Panel settings are remembered by the Macintosh SE itself and aren't affected by the current startup disk. (This is in contrast to the Chooser settings, most of which are stored in the System file on the current startup disk.) When you switch your Macintosh SE off, an internal battery provides power for your Macintosh SE to remember the settings.

See "Using the Control Panel" in Chapter 3.

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## Find File



Find File is a desk accessory that helps you locate folders, documents, and files on your disks. When you use the hierarchical file system to store a large number of files, you may find it difficult to remember what you've named your files or where you put them—especially if you're using a hard disk.

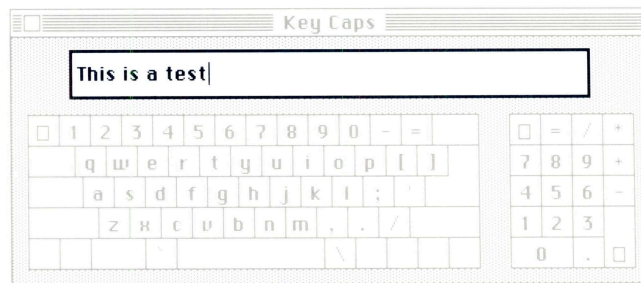
When you pull down Find File from the Apple menu, you type in key words, and Find File searches through your disk and displays all the files that contain those key words as a part of their file names. When you select a file from the list, Find File gives you information about that file—when it was created, when it was last modified, and how big it is. Find File also displays the path through the hierarchical file system that you take to get to the file.

Because some disks—especially hard disks—can hold lots of files, Find File lets you begin a search and then go back to work on something else. That way you don't have to sit and wait for it to do its work.

See “Using Find File” in Chapter 3.

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## Key Caps



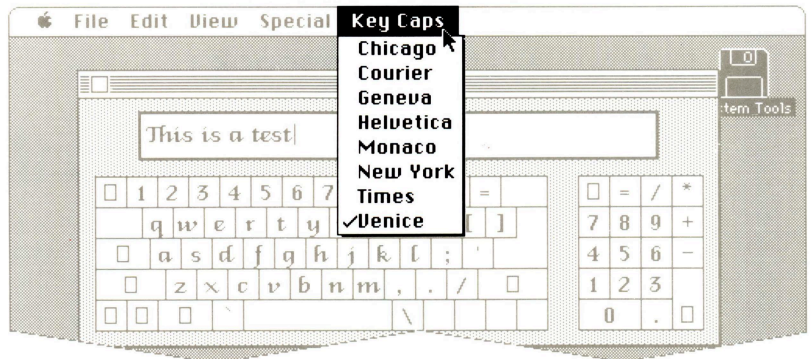
When the Key Caps accessory is the active window, a Key Caps menu appears in the menu bar. The menu always contains the fonts installed in the current startup disk's System file. (These are the fonts that will be available in any application you use with this startup disk.) To see the characters that another font produces, choose that font from the Key Caps menu. With any font you choose, you can use the Option, Shift, and Caps Lock keys to see the characters each key or combination of keys produces.

You can either type the character you want on the keyboard or just click it in the Key Caps accessory. Text you type on the keyboard or “type” by clicking Key Caps keys appears in the blank at the top of the Key Caps window. You can edit this text in the usual way and cut and paste it among other desk accessories or any document. (Some applications won't let you paste fonts from the Key Caps accessory.)



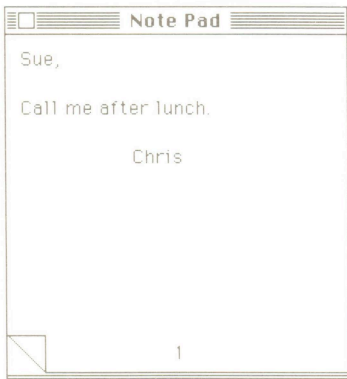
Press the Option, Shift, or Caps Lock key or press the Option and Shift keys together on the Macintosh SE keyboard; the Key Caps desk accessory displays the characters you can type while holding down that key or combination of keys. For example, in most fonts, if you type the equal sign (=) while holding down Option, you get a “does not equal” sign ( $\neq$ ). If you type the equal sign while holding down both Option and Shift, you get a “plus or minus” sign ( $\pm$ ).

See “Keyboard” earlier in this chapter for how to produce accented characters using the diacritical marks in the optional character set.



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## Note Pad



Use the Note Pad to jot down comments and keep them separate from the document you're working on. Or you can type text and edit it even if you're using an application that doesn't allow text editing in the usual way. Use the Edit menu to cut and paste into and out of the Note Pad.

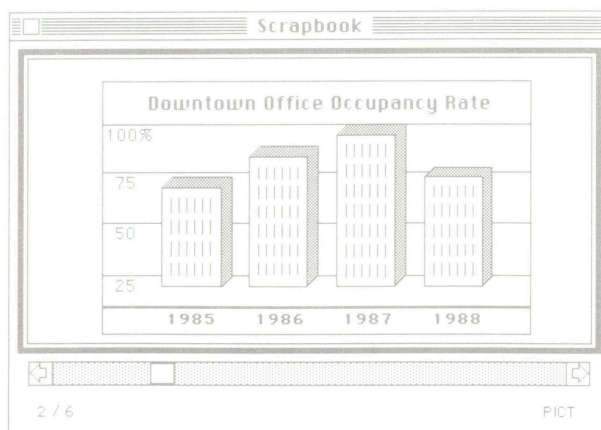
You have eight numbered pages of Note Pad paper. Turn to the next page by clicking the turned-back corner of the current page. Turn to the previous page by clicking the bottom-left corner of the Note Pad.

Notes you type are automatically saved and stored in the Note Pad file on the current startup disk. You can copy Note Pad files among disks or remove them to gain space on the disks. You can keep more than one Note Pad file on the same disk by renaming one of them or keeping it in another folder. When you choose Note Pad from the Apple menu, you always see the Note Pad whose contents are in the same folder as the System file and Finder on the current startup disk.

The Note Pad is included in the desk accessory file on the *Utilities* disk. Use the Font/DA Mover to install it on any startup disks you want. See the *Macintosh Utilities User's Guide*.

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## Scrapbook



Keep pictures and text that you use frequently in the Scrapbook. For example, you might keep your letterhead there or favorite illustrations from MacPaint. Paste in something you cut or copied from another desk accessory or a document. And copy or cut the current picture or text (which is automatically selected) to paste into other documents or desk accessories. Use the scroll bar to look through the Scrapbook.

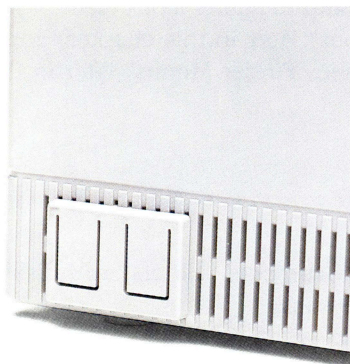
The contents of the Scrapbook are stored in the Scrapbook file on the current startup disk. You can copy Scrapbook files among disks or remove them to gain space on the disks. You can keep more than one Scrapbook file on the same disk by renaming one of them or keeping it in another folder. When you choose Scrapbook from the Apple menu, you always see the Scrapbook whose contents are in the same folder as the System file and Finder on the current startup disk.

See “Using the Scrapbook” in Chapter 3.

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## Programmer's switch



The programmer's switch is included for people who want to write application programs for the Macintosh SE. If you aren't an applications developer, just ignore the switch. Installing it and using it in the wrong way could cause you to lose information.

If you are an applications developer, install the programmer's switch only if you're developing stand-alone applications or desk accessories. The switch has two parts. The front part of the switch is a reset switch. Pressing it is just like turning the power switch off and back on, and carries the same cautions—press it only in the Finder with all disks properly ejected. The back part of the switch is an interrupt switch; press it only if you have debugging software installed.

The switch snaps into place on the left side of the Macintosh SE.

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## Finder reference

The Finder is Macintosh's special application used to organize and manage documents and to start other applications. You use the Finder every time you turn on your Macintosh SE, or whenever you move from one application to another.

Common Finder tasks include

- opening, closing, copying, discarding, moving, and renaming documents, folders, applications, and disks
- organizing documents, applications, and folders on the desktop, in folders, and on disks
- ejecting and initializing disks

Some of the Finder's capabilities are also available while you're using an application. You can open new documents, save work on a disk (using the same folders that appear in the Finder), examine the contents of disks and their folders, eject disks, print the current document, or return to a previous version of a document without returning to the Finder.

You work in the Finder by selecting and dragging icons (see "Selecting Icons" and "Dragging Icons" later in this chapter) and by choosing commands from menus (see "Finder Menus" later in this chapter).

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## What the Finder manages

The Finder manages applications, documents, folders, and disks on the desktop—it even empties the trash.

### Applications and documents

When applications and documents are closed, they're represented as icons. You can open, close, rename, duplicate, discard, or organize applications and documents on disks and in folders.

### Disks

The contents of disks are displayed in directory windows. Disks can contain documents, applications, and folders. Each item is represented by an icon that you can select and drag. You can choose to see the contents of disks arranged in several ways with the View menu.



A disk currently inserted into either of the internal disk drives, or any external disk drive, appears as a white disk icon (black if it's selected). The icon becomes hollow when its window is opened. The icon for a disk that has been ejected appears dimmed in gray. (Both inserted and ejected icons are highlighted when selected.)

The Macintosh SE remembers the contents of a disk inserted and then ejected (unless you ejected the disk by dragging its icon, whether dimmed or highlighted, to the Trash). You can open an ejected disk (or any folder inside it) into a directory window; any items on the ejected disk also appear dimmed. You can manipulate a dimmed icon just like an icon that's not dimmed.

The Macintosh SE will ask you to reinsert the ejected disk when it needs it. If you want the Finder to remove an ejected disk's icon from the desktop and never ask for the disk again, you can drag the ejected disk's icon to the Trash. You can also drag an inserted disk's icon to the Trash to eject it and to remove its icon from the desktop.

See “Startup Disks” and “Arranging Your Work on Disks” in this chapter for more information about disks.

## **Folders**

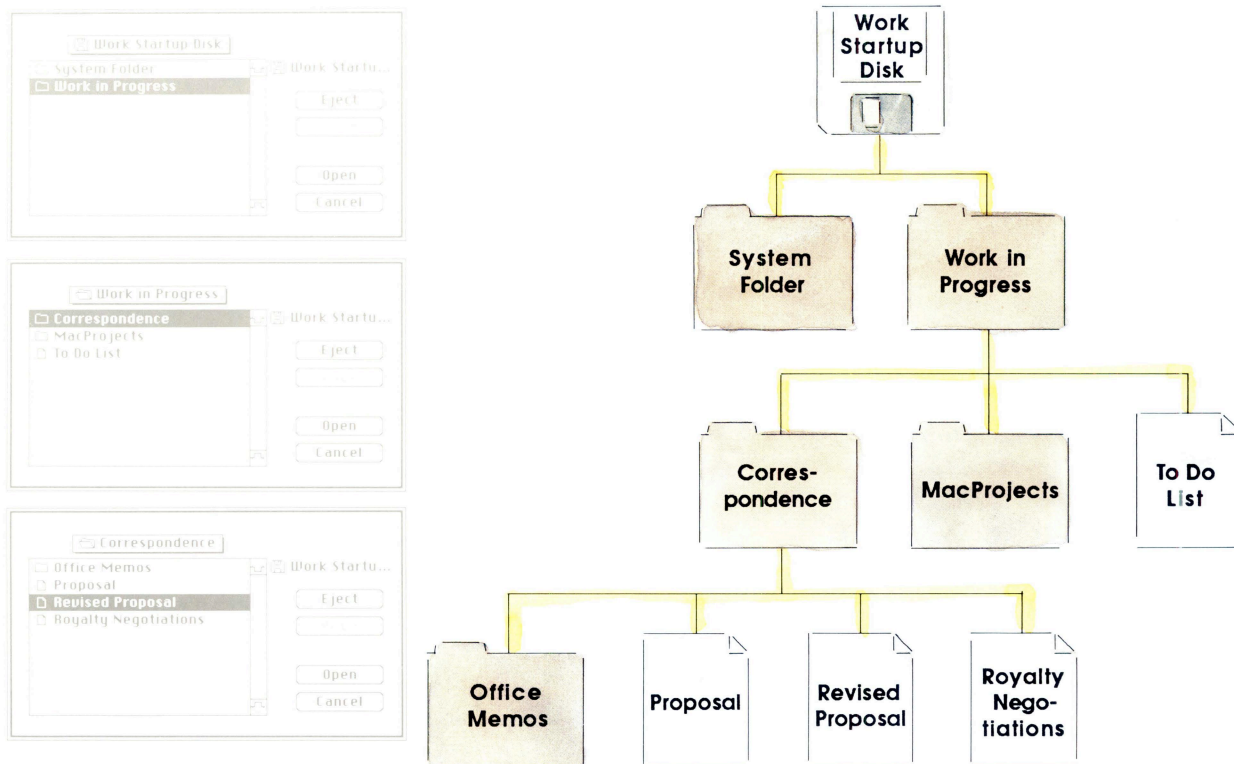
Use folders to arrange your applications, documents, and other files in ways that make sense to you. You can leave your applications, documents, and other files in the disk window, or you can put them in folders. (You make new folders by choosing the New Folder command from the File menu.) You can even put folders within other folders.

To see the contents of a folder, open the folder just as you would a disk icon—by selecting the folder icon and choosing Open from the File menu or by double-clicking on the icon. The folder icon opens into a directory window.

## **The hierarchical file system**

Folders let you arrange your applications and documents in a hierarchy. When you open a disk and see a folder or file in the disk's directory window, you're looking at the top level of the hierarchy. When you open that folder, you see another window that shows you what's inside—probably more files and folders. Now you're looking

at the second level of the hierarchy. If there's a folder at this second level, when you open it, you'll find the third level—and so on and so on. Placing folders within folders is called **nesting**. The feature that allows nesting is called the **hierarchical file system**. You can design as deep a structure as you like with the hierarchical file system. Most people, however, find that retrieving a file nested more than four levels deep becomes tedious.



Luckily, you don't have to worry about misplacing a file; you can find any file or folder, no matter how deeply nested, by using Find File. (See "Find File" earlier in this chapter and "Using Find File" in Chapter 3.)

Whenever you choose Open or Save As from the File menu within an application or whenever you save a document for the first time using the Save command, you see the same hierarchy of folders you created in the Finder (as long as the disk is initialized two-sided; see "Initializing Disks" and "Summary of Managing Documents Within an Application" in Chapter 3).

The first directory you see when you choose Open or Save As is the folder (or disk if you're at the top level) that you last saved a document to or opened a document from. You can move up or down the hierarchy to open documents from or save documents to any level in the hierarchy. You can keep documents or folders with the same name on the same disk as long as they're in different folders.

See "Using the Hierarchical File System Within Applications" in Chapter 3.

## **Desktop**

The desktop is a handy temporary resting place for icons. If you're concentrating on only a few documents and applications at a time, and they're on different disks or in different folders, you can drag all the documents to the desktop and work on them there. You can even close the windows for the folders and disks they came from; the Finder will remember where the documents belong.

You can put icons back where they came from by selecting them on the desktop and choosing Put Away from the File menu.



## Trash

The Trash is a receptacle for discarding documents and folders. You can't discard disks this way. Instead, dragging a disk to the Trash ejects the disk and removes its icon from the desktop. (If the disk is the current startup disk, dragging its icon to the Trash ejects it but leaves the icon on the desktop.) When you discard a folder, the folder and its entire contents disappear. Locked documents can't be discarded; you must unlock them before discarding. (You unlock documents by selecting them, choosing Get Info from the File menu, and clicking the checked "Locked" box.)

Whenever you drag a folder or document to the Trash, the Trash icon expands to show you there's something in it. When you open the Trash icon, it shows the last few documents you discarded. You can recover those documents by dragging them out of the Trash back onto the desktop. But documents stay in the Trash only for a while; the Finder empties the Trash when it needs the space. You can reclaim the space immediately by choosing Empty Trash from the Special menu.

---

## Selecting icons

Once you select an icon, the Edit menu commands operate on that icon's name (unless it's locked), and the File menu commands work on what the icon represents.

When more than one icon is selected, the editing commands in the Edit menu are dimmed.

You can select a group of icons only if they're all in the same window or all on the desktop. If you want to work on a number of documents in different folders or disks, drag them to the desktop and select them all there.

Operations on a group of icons are performed one by one—printing a group of documents, for example. The icons are taken in order from left to right, top to bottom.



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## Dragging icons

Dragging an icon from one place to another moves that icon to the new place. You can drag an icon onto the desktop, onto a folder, disk, or Trash icon, or into an open folder, disk, or Trash window.

Dragging an icon from one place to another on the same disk (or to a folder on the same disk) merely moves the icon to the new place. Dragging an icon to another disk (or to a folder on another disk) leaves a copy behind on the original for safekeeping. If you don't want the copy left behind, just drag it to the Trash afterward.

If you drag an icon to another disk and there's already an icon with that same name on that disk, you're asked if you want to replace it with the icon you're dragging.

Drag	To a folder on the same disk	To a different disk	To a folder on a different disk	To a hard disk	To the trash
A document	Moves it there	Copies it there	Copies it there	Copies it there	Discards it (unless the document is locked)
A folder	Moves it there	Copies it and its contents there	Copies it and its contents there	Copies it and its contents there	Discards it and its contents
An application	Moves it there	Copies it there	Copies it there	Copies it there	Discards it
A disk	—	Copies it there replacing any existing contents	—	Copies it there adding to any existing contents	Ejects the disk and, if it's not the current startup disk, removes its icon from the desktop

You can drag locked documents (except to the Trash); you can't drag anything to or from a locked disk. See the Get Info command in "The File Menu" later in this chapter.

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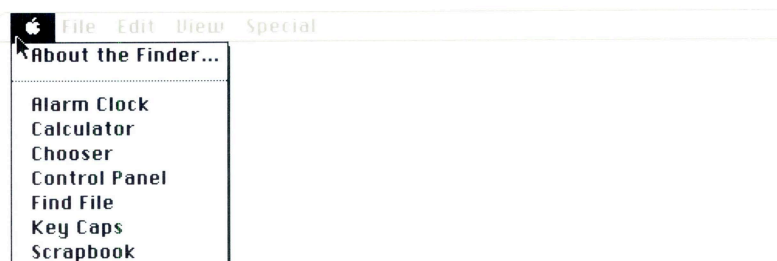
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## Finder menus

Each Macintosh application presents commands in menus you pull down from the menu bar. Together with dragging icons, the Finder's menus allow you to do all your desktop-management tasks.

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## The Apple menu



### About...

Shows the version number and the authors of the application you're using as well as the memory size of the Macintosh SE.

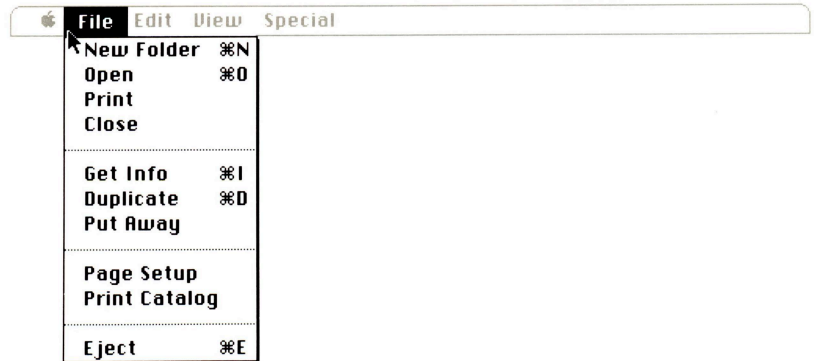
### Desk accessories

Choosing any of the desk accessories causes that accessory to appear on the desktop. You can use the Edit menu to cut, copy, and paste the information in most desk accessories.

The desk accessories are explained more fully in "Desk Accessories" earlier in this chapter and in "Using Desk Accessories" in Chapter 3.

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## The File menu



The commands in the File menu operate on icons and windows.

### New Folder

Creates an empty folder that can hold documents, applications, or other folders. New folders appear in the active window on the desktop. The command is dimmed if no directory windows are open. See “Folders” earlier in this chapter.

### Open

Opens the selected icon into a window. If the icon represents a document, opening it also starts an application so you can work on the document. If the icon represents an application, opening it gives you a new, untitled document.

In order for you to open a document, the application that created it must be on a currently inserted disk.

If you select a document and an application, the Finder attempts to use that application with the document. For example, selecting MacWrite along with a text-only document you created with MacTerminal opens MacWrite to work on the text-only document.

If you select more than one icon and choose Open, the Finder attempts to open the first icon’s application to work on all the other selected icons.

## **Print**

Prints the document represented by the selected icon or icons, in left-to-right, top-to-bottom order. Usually the documents must be created by the same application.

In order to print a document, you must have the application that created it on a disk whose icon appears on the desktop. Document printing from the Finder follows the same rules and procedures as printing in that document's application.

With most applications, when you choose Print, a dialog box appears. Select the options you want and click OK or press the Return key. See each application's manual for more information on how to print with that application. See each printer's manual for information about using that printer.

## **Close**

Closes the active window, zooming it back down to its icon. The icon remains selected. (If the active window is a desk accessory, it just disappears.) The window behind the window you just closed, if there is one, then becomes the active window.

## **Get Info**

Opens a window that displays information about whatever the selected icon represents. The displayed information includes the kind of item (document, folder, or application and, if it's a document, which application created it), the date it was created, the size, which disk and drive it belongs to, and the date it was last changed. You can still drag or open a selected icon while its information window is open.



You can add comments by typing in the Comment box at the bottom of the window. You can edit your comments as you edit any text. (Software manufacturers often record the version number of the software you're using in the Comment box in the Get Info window.)

The Locked check box allows you to lock a document or application. When the Locked box is checked, that document or application can't be disposed of nor can its name be changed. You can't save any changes to a locked document.

## **Duplicate**

Duplicates the selected items on the same disk. The duplicates are named *Copy of*, followed by the name of the original.

Duplicating a folder duplicates the folder and all its contents, even if the contents are out on the desktop rather than inside the folder.

## **Put Away**

Puts away any selected documents, folders, or applications on the desktop or in the Trash window and returns them to the folders and disks they belong to. If a disk icon is opened into a directory window, the items you put away appear there; otherwise they will appear the next time you open the disk icon. This command is dimmed when no icons are selected on the desktop or in the Trash window.

## **Page Setup**

Lets you set up the page size, orientation, and other options for directories you print using the Print Catalog command. The Page Setup command doesn't work with documents you print from the Finder; a document's page setup is controlled by the Page Setup command within each application.

## Print Catalog

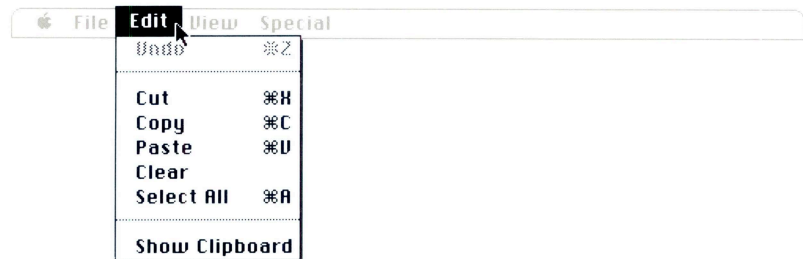
Prints the contents of the active directory window, in whatever view you have the directory arranged.

## Eject

Ejects the selected disk or the disk represented by the active window. If no disk is selected, the Finder looks for any inserted disk to eject, starting with the current startup disk. Whenever a disk has been ejected, its icon and the icons belonging to it are dimmed to show they're no longer available. (You can also eject a disk by dragging its icon to the Trash.) If the internal hard disk is the current startup disk, when you choose Eject, the command is ignored. If the hard disk is *not* the current startup disk, its icon disappears from the desktop and doesn't reappear until you restart the system.

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## The Edit menu



The Finder's Edit menu allows you to edit

- ☐ the names of disks, documents, applications, or folders
- ☐ text in an information window (opened by selecting the icon and choosing Get Info from the File menu)
- ☐ text or pictures in desk accessories

You cannot use this menu to cut or copy icons. By dragging icons, you can make copies of, or get rid of, the documents, applications, folders, or disks that the icons represent. See "Dragging Icons" in "Finder Reference" in this chapter.

Selecting an icon also selects its title. Anything you subsequently type replaces the old text. Clicking the selected text itself causes an insertion point to appear. You can edit this text as you edit any text.

### **Undo**

Undoes your last text-editing action in desk accessories that use text. It may undo other actions in some desk accessories.

### **Cut**

Removes the selection and places it on the Clipboard, replacing the previous contents, if any.

### **Copy**

Places a copy of the selection on the Clipboard, replacing the previous contents, if any.

### **Paste**

Puts a copy of the contents of the Clipboard at the insertion point. You can continue to paste copies until you cut or copy a new selection, which replaces the old contents of the Clipboard.

### **Clear**

Removes the selection without placing it on the Clipboard.

### **Select All**

Selects all icons in the active window or, if no windows are open, all icons on the desktop.

### **Show Clipboard**

Displays a window with the current contents of the Clipboard—that is, whatever you last cut or copied.

---

## The View menu



You might keep your directory windows arranged by icon most of the time. But the commands in the View menu also let you view directories of disks, folders, or the Trash in other arrangements.

In any text view of a disk or folder directory, small icons appear to the left of each document, folder, or application title. Icons and text in titles behave the same way in whatever view you choose. Clicking either an icon or its title selects the item; the pointer then becomes an I-beam if moved over the item's title. Dragging an icon or title moves or copies the item.

The current view of the active window is marked in the View menu by a check.

### By Small Icon

Shows the contents of the active directory window with small icons to the left of the icon names. This view is especially helpful when you have lots of documents and applications on a disk—if you have a hard disk, for example. Hold down the Option key while you choose Clean Up from the Special menu to display the contents neatly and compactly.



**By Icon**

Shows the contents of the active directory window as icons, just as on the desktop.

**By Name**

Lists the contents of the active directory window alphabetically by name. Uppercase and lowercase are considered the same.

**By Date**

Lists the contents of the active directory window chronologically by modification date. The document you changed most recently is listed first. The modification date for a folder indicates when you created it or when you changed its contents by adding or removing items from it.

**By Size**

Lists the contents of the active directory window by size, largest first. Useful for seeing which documents are taking the most room on the disk. Folders are listed according to the size of their contents.

**By Kind**

Lists the contents of the active directory window by kind—first documents, then applications, and then folders. For a document, it tells which application created it.

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## The Special menu



### Clean Up

Used only in By Icon and By Small Icon views. Arranges all icons in the active window in neat rows and columns. If no directory windows are open, Clean Up cleans up the desktop.

### Empty Trash

Removes the contents of the Trash and makes the space it took on the disk available for you to use immediately. The Finder also empties the Trash automatically whenever it needs the space.

### Erase Disk

Initializes (and completely erases) the disk whose icon is selected. You're offered the usual choices to initialize the disk. See "Initializing Disks" in "Disks" earlier in this chapter for more information about initializing disks. You can't erase the current startup disk because the Macintosh SE needs information on that disk in order to work. If you want to erase a certain disk, start the Macintosh SE with a different disk, eject that disk if necessary, and insert the disk you want to erase.

## **Set Startup**

Lets you jump immediately into an application without going through the Finder. You set the startup application by selecting it in the Finder and choosing Set Startup. The next time you start your Macintosh SE with this disk, you'll go immediately into the application. To reset the startup place to the Finder, quit the application, select the Finder icon (first open the System Folder, if necessary), and choose Set Startup again.

## **Use MiniFinder...**

Saves you time in moving among the documents and applications you're currently using the most. See "Using the MiniFinder" in Chapter 3 for how to use the MiniFinder.

## **Restart**

Ejects any inserted disks (first saving any necessary information), and then restarts the Macintosh SE.

## **Shut Down**

Ejects any inserted disks, suspends the Macintosh SE, saving any necessary information, and presents a Restart button on the screen. If you're finished working, just turn off the machine. If you want to switch startup disks, insert the new disk and click the Restart button.

It's a good idea to choose Shut Down before you turn off the Macintosh SE. That way, the system has a chance to close files properly and make sure everything is in place on your disks.

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## Macintosh SE shortcuts

In general, Macintosh shortcuts are just quicker ways to do things you can ordinarily do the “long way.” Some shortcuts apply only to a specific Macintosh application; each application’s manual explains its own.

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### Double-click

Double-clicking an icon opens it. In text, double-clicking a word selects the entire word.

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### Shift-click

Holding down the Shift key and clicking adds to an existing selection. As long as you hold the Shift key down, the first selection isn’t deselected when you make a new selection. For example, in the Finder, when you’re selecting icons, you can select more than one by holding down the Shift key while you continue clicking icons. In some applications, Apple-click also performs a similar function.

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### Close box

Clicking the close box in the title bar of the active window closes it, just like choosing Close from the File menu.

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### Zoom box

Clicking the zoom box on the right side of an active window’s title bar expands the window to full size. Clicking the zoom box on an expanded window returns it to its former position and size.

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### Enter and Return keys

Pressing the Enter or Return key in response to a dialog box is the same as clicking the button that confirms the command or clicking the outlined button if there is one.



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## Tab key

Pressing the Tab key in a dialog box usually selects the next place to supply information.

In the dialog boxes that you see when you choose Open or Save As within an application, pressing the Tab key is the same as clicking Drive.

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## Delete key

Using the Delete key with a selection is the same as choosing Clear from the Edit menu. Unlike using the Cut command, use of the Delete key will not save anything on the Clipboard.

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## Option key

Holding down the Option key during the entire initialization process installs the hierarchical file system on a 400K disk (or one side of an 800K disk). This is the same file system you get when you initialize an 800K disk two-sided, but it's placed on one side of the disk only. Use disks initialized this way only with updated startup disks.

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## Apple key



Apple key

You can issue many commands (including most commands in the Edit menu) by holding down the Apple key while you type a character. Commands that have Apple key equivalents list the key to type to the right of the item in the menu.

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### Important

The Apple key has two icons on it: one looks like a clover leaf, and the other is an apple. Earlier Macintosh keyboards had just the clover leaf, and many applications refer to this key as the Command key. If your application tells you to press the Command key, this is the key it means.

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Holding down the Apple key while typing a period (.) usually stops whatever's happening—printing a document, for example.

Holding down the Apple and Shift keys and pressing 1 ejects any disk in the lower internal 3.5-inch disk. Holding them down and pressing 2 ejects any disk in the upper internal 3.5-inch drive, if your system includes the second internal drive, or any disk in an external drive if you don't have the second internal 3.5-inch drive. If you have two internal 3.5-inch disk drives *and* an external 3.5-inch drive, holding down both keys and pressing 0 (zero) ejects the disks from the external drive. If you're using an application and there are any open documents with unsaved changes, you may lose those changes if you eject disks this way. If you're not sure whether there are unsaved changes, it's better to eject disks in any of these other ways—clicking an Eject button, choosing Eject from the File menu, dragging a disk icon to the Trash, or choosing Shut Down from the Special menu.

Holding down the Apple and Shift keys and pressing 3 creates a MacPaint document with the current contents of the screen.

Holding down the Apple and Shift keys and pressing 4 prints the current contents of the active window on an ImageWriter. (This feature does not work with a LaserWriter.)

With the Caps Lock key down, holding down the Apple and Shift keys and pressing 4 prints the contents of the entire screen on an ImageWriter. (This feature does not work with a LaserWriter.)

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## Selecting by typing

In the directory that appears when you choose Open within an application, any characters you type are matched character for character to select names in the directory. If you type a *b*, the first name beginning with a *b* (or the first name to follow alphabetically if there are no *b*'s) is selected; as you continue to type, additional characters are matched. If you type *br*, for example, the first name beginning *br* is selected, and so on. The Delay Until Repeat setting in the Control Panel determines how long you can pause between characters before the Macintosh SE considers the next character a new request. See "Using the Control Panel" in Chapter 3.

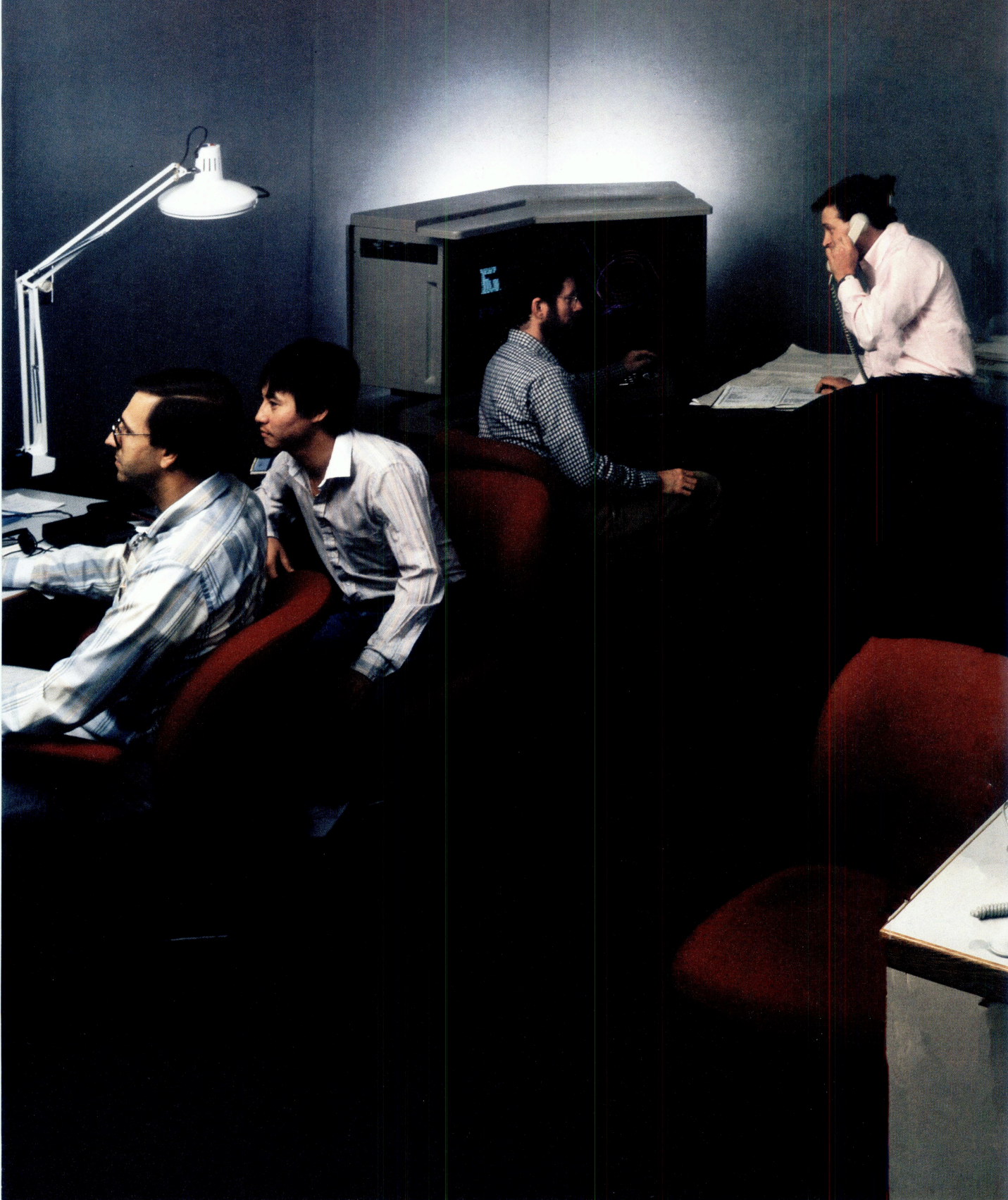
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## Finder shortcuts

These shortcuts are specific to the Finder. Most of them let you do “expert” functions.

Hold down	Do this	Get this result
Option key	Choose Close from the File menu	Closes all open windows
	Choose Clean Up from the Special menu (in icon views)	Realigns from scratch each icon in the active directory window to the grid pattern
	Double-click a disk or folder icon	Opens the icon, but after you open an application or document in the window, the window is closed when you return to the Finder
	Double-click an application or document icon	Makes the disk the application is on the current startup disk
	Drag an application or locked document to the Trash	Bypasses the alert message
Apple key	Drag a window	Moves the window without making it active
	Drag an icon (in icon views)	Aligns the icon with the grid the Clean Up command in the Special menu uses
	When the Finder encounters a disk	Rebuilds the desktop file. You lose any comments in the Get Info windows, but you gain speed
Option-Apple keys	Double-click on the Finder icon	Switches control of the computer to the System Folder that contains that Finder
Mouse actions	Double-click a hollow icon	Makes that icon's window active
	Before switching on, hold down the mouse button until just after the beep	Bypasses the memory test so you get to the desktop quickly
	Drag a disk to the Trash	Ejects the disk and removes its icon from the desktop if it's not the current startup disk

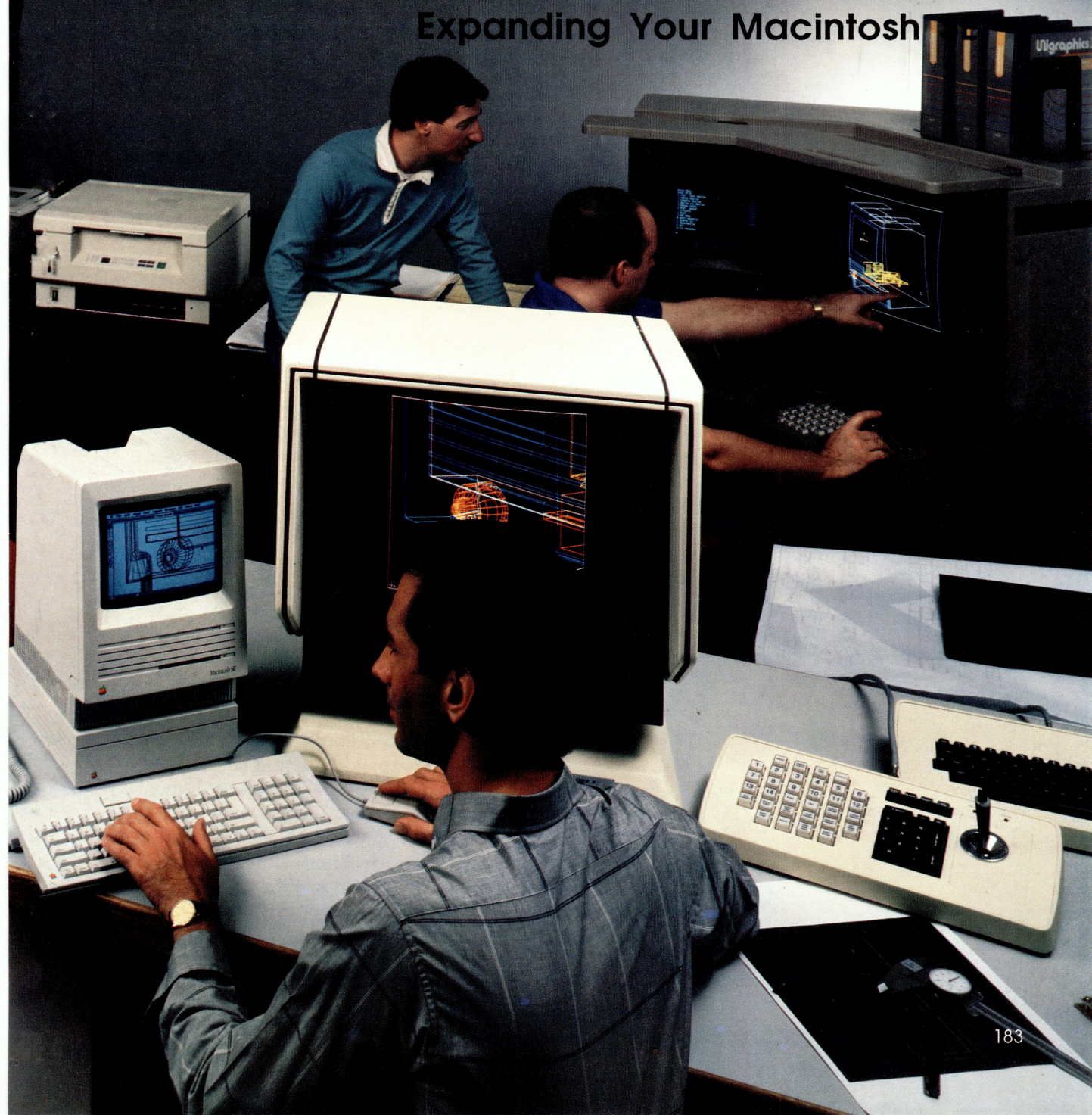






## Chapter 5

### Expanding Your Macintosh





You may be wondering what the *SE* means in *Macintosh SE*. It stands for *System Expandable* because, more than ever, this Macintosh is designed to grow along with your growing computer needs.

This chapter explains how you can maximize your system's potential by adding hardware options—both internal and peripheral. It also introduces you to some of the most useful software applications available for Macintosh computers.

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## Hardware

There are lots of devices you can add to your Apple Macintosh SE system to expand its capabilities.

You probably selected some of these devices when you purchased your Macintosh SE, and they were installed inside the computer's case by your authorized Apple dealer. Other devices you attach through ports on the back panel of the computer. (For installation instructions for devices you attach, see the manuals that come with those devices.)

Ask your authorized Apple dealer or representative for more information on the hardware options and peripheral devices available for the Macintosh SE.

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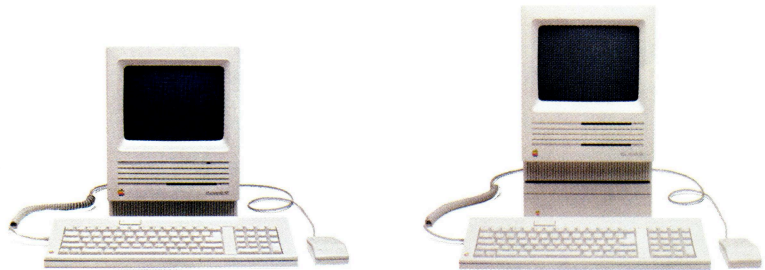
## Disk drives

The Macintosh SE's internal 3.5-inch disk drives use 800K, double-sided, 3.5-inch disks to store your applications and your work. (They can use 400K, single-sided disks, too.) If you have only one drive, even with all that space on one disk, you may end up having to swap your system and data disks so your computer can read in system information from your system file, or parts of an application too large for the computer's memory. And making back up copies of your disks with just one drive can be very time-consuming.

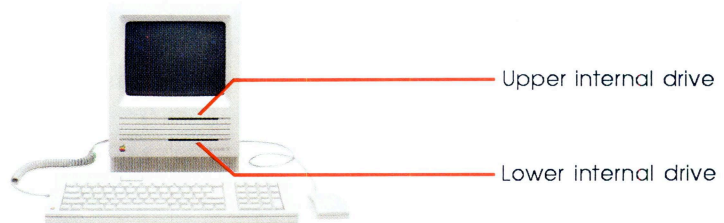
You'll find you can work more efficiently with another disk drive. A second drive lets you copy disks without any disk swapping. It also lets you keep system files and applications on one disk and all your documents on another. Or you might have one large system file on a single disk and one disk for each application and the documents you created with it. Even better, you could keep all your system files, applications, and documents—everything—on a hard disk drive and use 3.5-inch disks only as back up copies. A multi-drive system lets you work more efficiently, more productively.

One of the options you can choose for your Macintosh SE is to get a hard disk drive. With a hard disk you can keep all of your applications and documents in one place and get at them quickly. And you have a variety of hard disks to choose from. First is the Macintosh Internal 20SC Hard Disk, a built-in hard disk drive that gives you 20 megabytes of memory—about 10,000 pages of data storage. (Your dealer installs the internal hard disk for you.) Or you can get the very same device in a stand-alone model: the Apple Hard Disk 20SC. Both are **SCSI** devices that give you very quick access to your applications and data.

**SCSI** is short for *Small Computer System Interface*. It's used by your computer to communicate with other devices in your system. See "The SCSI Interface" later in this chapter.



Another option is to get a second internal 3.5-inch drive—the Macintosh 800K Internal Drive. It's another 800K drive that uses double-sided, 3.5-inch disks—just like the first internal drive. Your dealer installs the second internal drive for you, right above the first one.



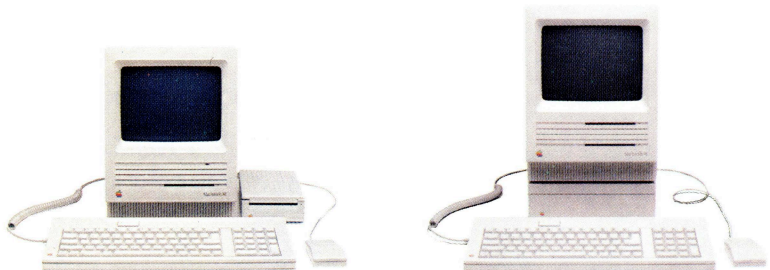
You can't choose this option if you also want the internal hard disk. They both go in the same place inside the Macintosh SE. Not to worry, though, because the 3.5-inch drive comes in a stand-alone model, too—the Apple 3.5 Drive. It uses 800K, double-sided, 3.5-inch disks and works just like the internal 3.5-inch drives.





You probably already made some decisions about which disk drive configuration you wanted when you purchased your Macintosh SE. But you can be confident that when your needs change, your Macintosh SE is designed to handle all kinds of disk drive combinations.

For example, if you decided on an internal hard disk, and you still want the versatility of a second 3.5-inch drive, you can add an external drive to your system. Or if you decided on a second internal drive, and later you decide you want the greater storage capacity of a hard disk, you can add a separate Hard Disk 20SC.



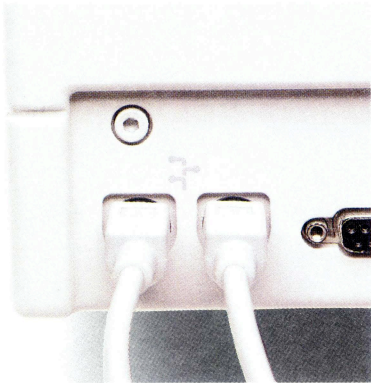
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## Option cards

You can't see it from the outside, but inside your Macintosh SE is an **expansion connector** that allows you to add an **option card** to your system.

Option cards contain electronic circuits that implement specialized functions not otherwise supported by the Macintosh SE. For example, option cards let you add co-processors; special devices for video, sound, and communications; disk drives for alternate operating systems; and adaptive devices for disabled users.

Your authorized Apple dealer or representative can tell you more about the option cards available for your Macintosh SE. Because the expansion slot is inside the main unit, your dealer or representative must install any option card you want to add to your system.



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## Apple DeskTop Bus devices

You already learned about the Apple DeskTop Bus when you set up your Macintosh SE. It gives you a variety of configurations for attaching your keyboard and mouse to the computer. But the Apple DeskTop Bus does more than accommodate lefties. It lets you attach a variety of other devices to the computer to enhance its performance. With the Apple DeskTop Bus, you can use light pens, graphics tablets, hand controls, joysticks, and specialized keyboards. They're easy to attach, too. You just daisy-chain them to your Apple Keyboard or connect them directly through one of the Apple DeskTop Bus connectors on the back panel of the computer.

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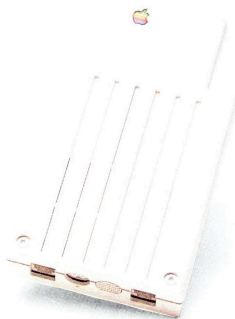
## RAM Expansion Kit

**RAM** stands for *random-access memory*. It's the area of computer memory where your applications and documents are held while you're working with the computer. Your Macintosh SE comes with 1 megabyte of memory—more than enough for most applications and documents. But if you want to increase the amount of RAM in your system, you can get a RAM Expansion Kit. With the RAM Expansion Kit, you add memory in increments up to a total system capacity of 4 megabytes.

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## Apple Personal Modem

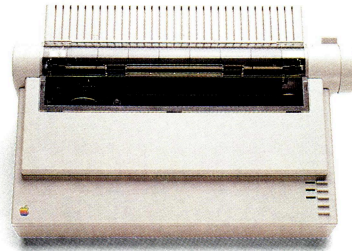
The Apple Personal Modem lets your Macintosh SE communicate with the rest of the world using telephone lines. You can send and receive messages through electronic mail, subscribe to news services, find out the latest price of your stocks, or access an entire university library from your Macintosh SE. The Apple Personal Modem can send and receive information at two speeds—300 baud and 1200 baud.



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## Apple ImageWriters

With an Apple ImageWriter printer attached to your Macintosh SE, you can get high-quality printed copies at a low cost. And if you have another Apple computer, you can use the ImageWriter with it as well.



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## Apple LaserWriters

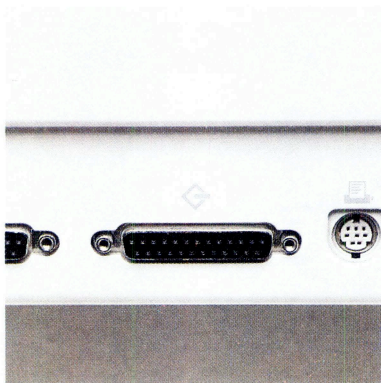
Apple LaserWriters give you near-typeset quality printed copies of your work, for a lot less money than you'd expect. And the LaserWriter uses the AppleTalk Personal Network so you can share the LaserWriter with the people you work with.



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## The SCSI port

Your Macintosh SE includes an SCSI (Small Computer System Interface) port that provides, through an industry-standard interface, very high-speed data access for hard disks, tape backup systems, and other devices. Because it uses an industry-standard interface, you can use many devices that would otherwise not work with Apple computers. The internal hard disk and the Apple Hard Disk 20SC are both SCSI devices.



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### Warning

Connecting an SCSI device incorrectly can damage your system. Appendix B provides important instructions for connecting SCSI devices to your system. If any of your devices are SCSI devices, read Appendix B before connecting them.

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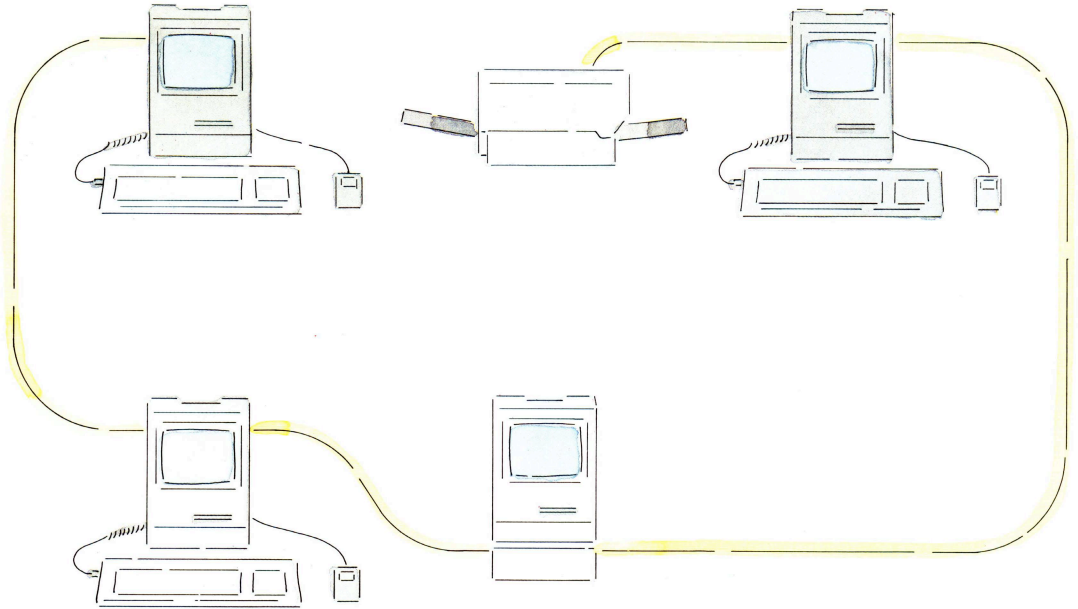
## AppleTalk Personal Network

A **local area network** is a group of computers linked physically by a network of communications cables.

The AppleTalk Personal Network is a low-cost **local area network** that's as easy to set up and use as your Macintosh SE. AppleTalk lets everyone in your work group communicate with each other (sending documents or electronic mail much faster than ordinary telecommunications). With AppleTalk you can also share the cost of high-performance resources such as the LaserWriter—at a fraction of the cost of other networks. You can also use the AppleTalk Personal Network to share powerful mass-storage devices.



AppleTalk networks can be linked together to form an interconnected series of AppleTalk **zones**. To link networks, you need a hardware device called a **bridge** (and its accompanying software). If your network is linked with other AppleTalk networks, and if you have access to the other zones, you can use the Chooser to scan the other zones for devices on those zones. See “Using the Chooser” in Chapter 3.



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## Audio accessories

Your Macintosh SE has an audio jack on its back panel that lets you attach a variety of audio accessories—like headphones, speakers, amplifiers, and other devices. The Macintosh SE lets you be as creative with sound as with words and pictures.

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## Adaptive devices for disabled users

Apple computers offer the promise of richer, fuller participation for disabled children and adults by helping to clear the misconceptions and stereotypes about their supposed limitations. Adaptive devices make it possible for disabled individuals to use the power of computing for their own wants and needs—through voice or breath-operated input devices, speech synthesizers, keyguards, environmental control systems, and so on.

Ask your authorized Apple dealer or representative for information on adaptive devices available for the Macintosh SE, or contact

Apple Computer, Inc.  
Office of Special Education  
20525 Mariani Avenue, MS 23-D  
Cupertino, CA 95014

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## Applications

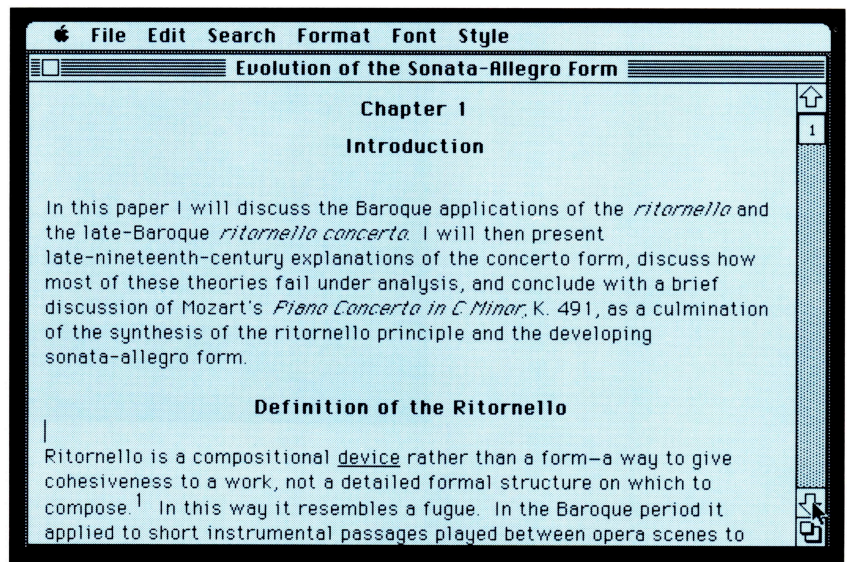
No matter what kind of work you have to do, there's a Macintosh application to help you do it.

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## MacWrite

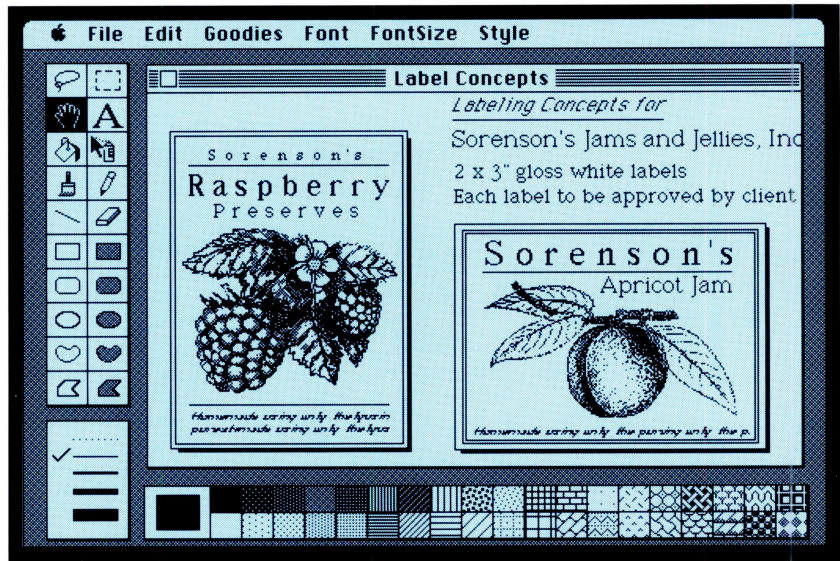
With MacWrite you create documents that look the same on the screen as they'll look when you print them. Rather than working around a lot of commands embedded in your text, you always see what you've really got. You use the mouse to select text and remove, copy, or move it. You can customize your documents with many fonts and styles, and you can control margins or line spacing with a single click.

You can add MacPaint or MacDraw graphics to documents you create with MacWrite or vice versa. With Macintosh, words and pictures mix beautifully.



## MacPaint

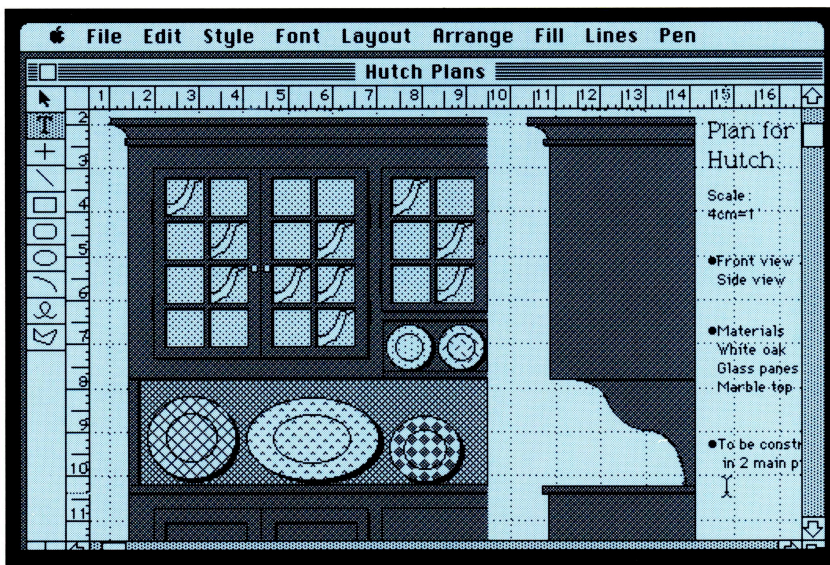
MacPaint brings out the artist in everyone. Whether it's a technical illustration for a research project or a sketch for a party announcement, you can do it with MacPaint. You can use MacPaint's drawing tools to draw perfectly structured shapes or your own freehand designs. You can type text in beautiful fonts, sizes, and styles and add text from other applications as well.





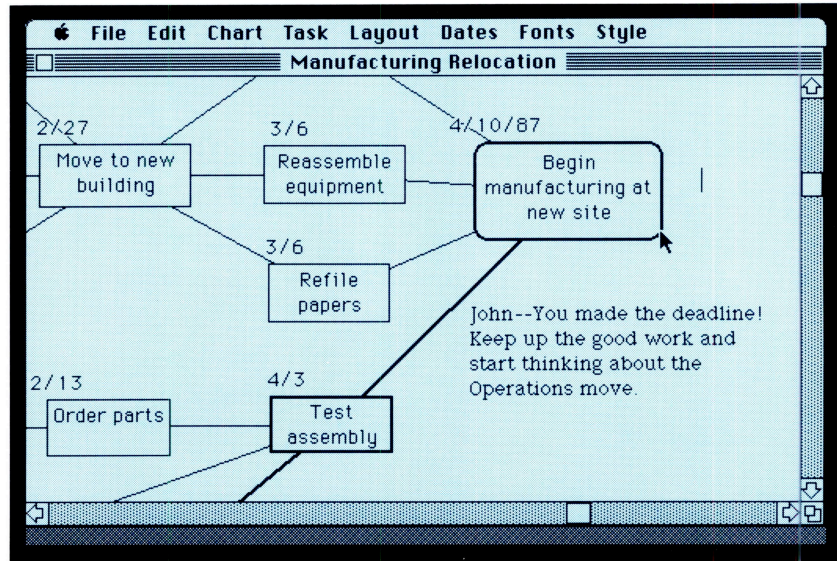
## MacDraw

MacDraw lets you create structured graphics on the Macintosh SE. You can prepare freehand drawings as well as perfect flowcharts, diagrams, graphs, technical drawings, and organizational charts. You can add text in different fonts, sizes, and styles.



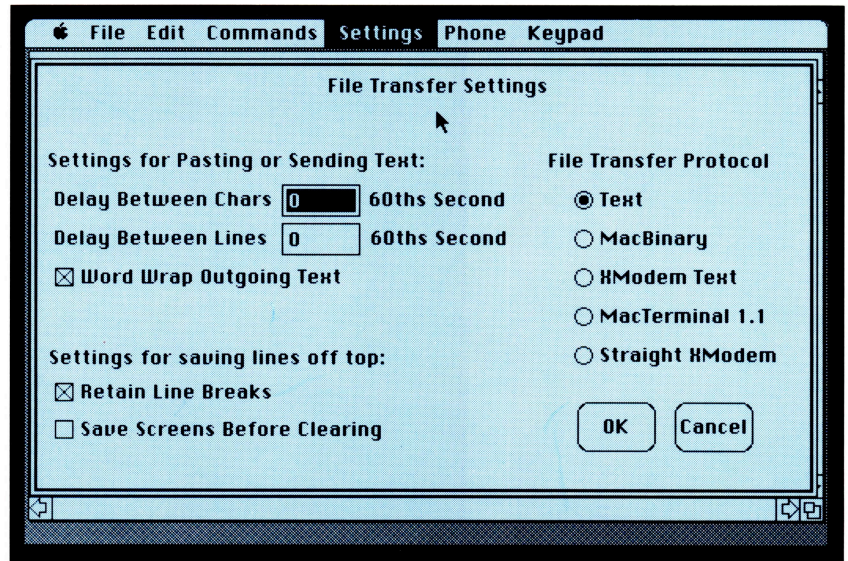
## MacProject

Project management and scheduling have never been easier. You tell MacProject what tasks are involved in your project and what resources you have. MacProject calculates the “critical path” to completion and estimates costs in money and time. If you miss (or beat!) a deadline or if your available resources change, MacProject recalculates everything in a flash.



## MacTerminal

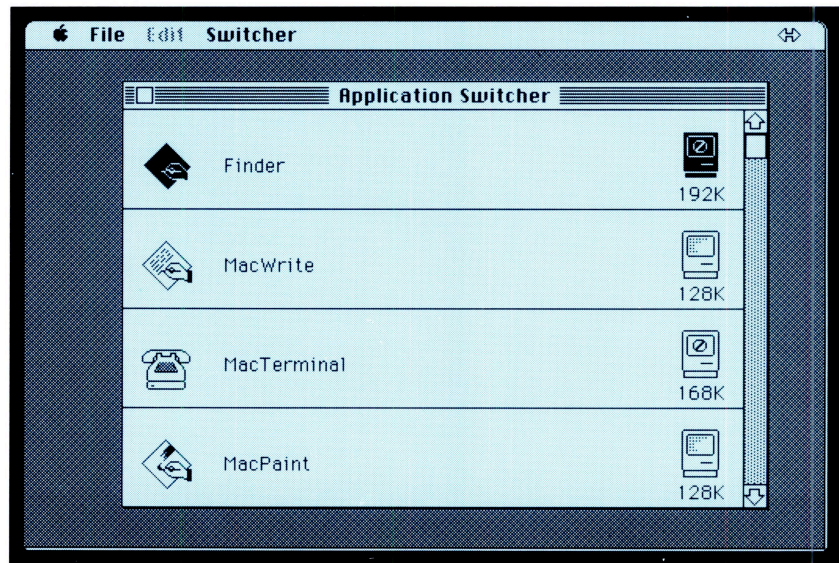
MacTerminal lets you communicate with the rest of the world. You can access information services such as The Source, CompuServe Information Services, or Dow Jones News/Retrieval; exchange information with another computer; and send and receive electronic mail.





## Switcher Construction Kit

With the Switcher™ Construction Kit and the Macintosh SE's full megabyte of memory, you can work with up to eight applications in memory at one time. You can construct "integrated" software customized just for the way you work; then you can switch among applications and exchange information as easily as you move papers on your desk.





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## And many more

Top software developers are introducing many more applications for the Macintosh SE. You can choose from

- electronic spreadsheets for budgeting, forecasting, and answering “What if?” questions
- data base management programs for helping you keep track of everything from inventories to prospective clients to your favorite restaurants
- charting programs for turning numbers nobody understands into charts everyone understands
- programming languages, publishing programs, spelling checker programs, and hundreds more for getting your work done (and games or educational programs for when you need a break)

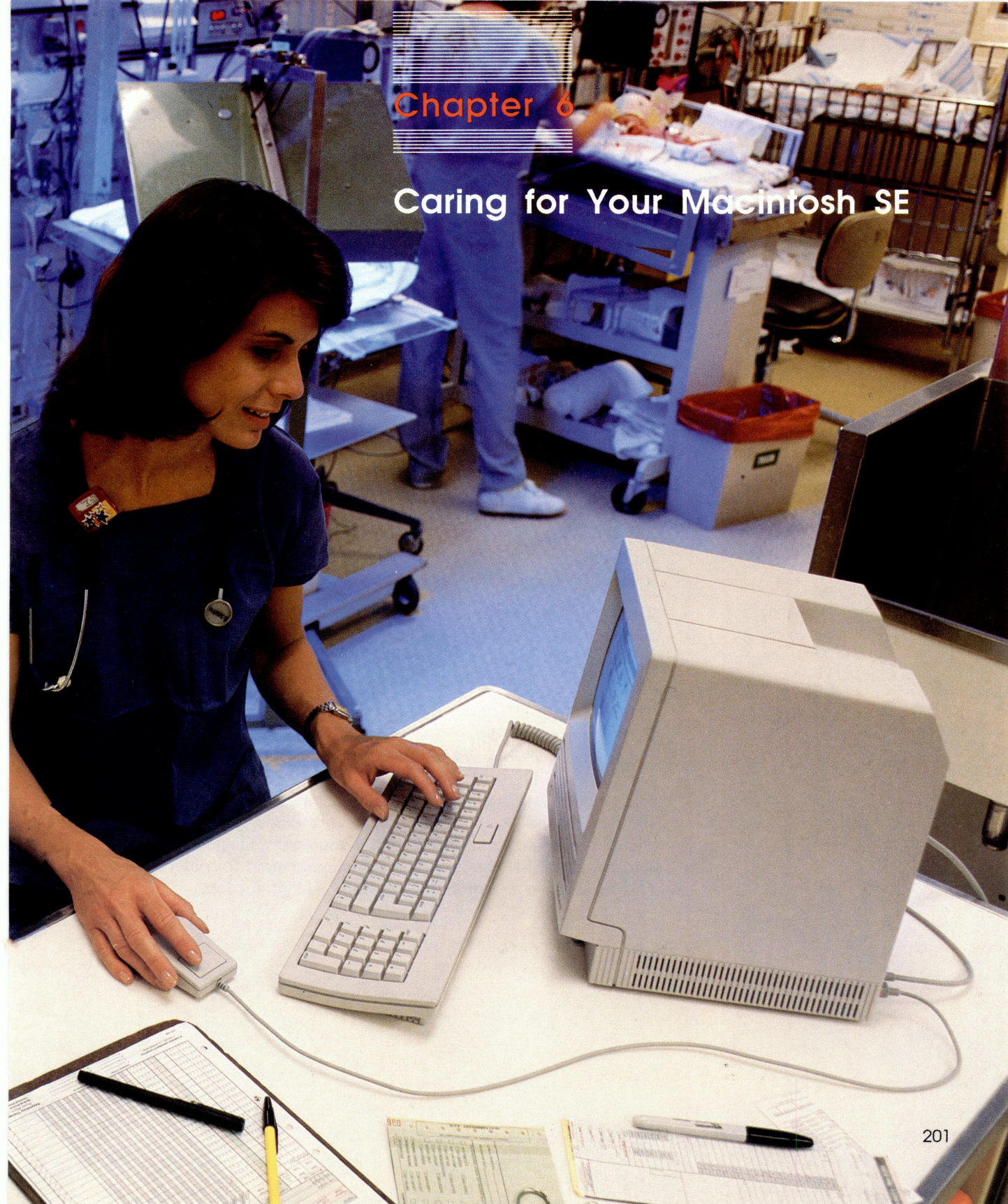
See your authorized Apple dealer or representative for more information about Macintosh applications.





## Chapter 6

### Caring for Your Macintosh SE





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## Keeping it in good shape

The first thing to know: you'll never hurt your Apple Macintosh SE computer by clicking in the wrong place or pressing the wrong key. And if you follow the few suggestions here, you and your Macintosh SE will be together for a long time.

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### Main unit

Give your Macintosh SE plenty of space—enough so air can circulate on all sides, as well as underneath it. The computer has a built-in fan that maintains the operating temperature, but be sure not to block its outlet. Don't use the system on a thick-pile carpet or on upholstery. You can store your Macintosh SE in a bookcase, but it shouldn't be crammed into a small space while you're using it.

The Macintosh SE can tolerate about the same range of temperatures as you can, but don't let it sit outside in direct sunlight or expose it to rain (much less hail, sleet, or snow). The main unit will feel a bit warm to the touch after it's been on for a while.

The Macintosh SE is not made of cast iron, but it's not made of antique porcelain, either. Use common sense when handling it—especially if your system includes the internal hard disk. The hard disk can be damaged if the computer is dropped or bumped into something, particularly when the computer is on. If you need to transport the Macintosh SE any great distance, use the materials that the computer came packed in. If your system includes the internal hard disk, the canvas cases manufactured for older Macintosh units are probably not sufficient protection.



## Warning

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Never try to remove the cover from the main unit. The Macintosh SE contains extremely high-voltage components that retain an electrical charge, even after the unit is switched off. If you have a problem with the computer, bring it to your authorized Apple dealer or representative.

The Macintosh SE is intended to be electrically grounded. It's equipped with a three-wire grounding-type plug, a plug that uses a third (grounding) pin. This plug will fit only into a grounded-type AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet and, if necessary, install a grounding conductor. Do not defeat the purpose of the grounding-type plug.

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Follow these suggestions if you need to clean the Macintosh SE:

- ☐ Clean the main unit with a *damp* (not wet) lint-free cloth.
- ☐ Don't use aerosol sprays, solvents, or abrasives that might damage the computer's finish.
- ☐ If the screen gets dirty, apply a household glass cleaner to a clean cloth or paper towel and wipe the screen. Don't spray glass cleaner directly onto the screen. It could run down inside the case and damage electrical circuits.

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## Keyboard

Try not to spill anything on your keyboard. It can be ruined by a spilled soft drink or anything that leaves a sticky residue. Here's what to do if you spill something on the keyboard and it stops working:

- ☐ If the liquid is sweet or sticky, unplug the keyboard and take it to your authorized Apple dealer for repair or replacement.
- ☐ If the liquid is thin and clear, try unplugging the keyboard, turning it upside down to let the liquid drain out, and drying it for 24 hours at room temperature. If it still doesn't work, take it to your authorized Apple dealer.

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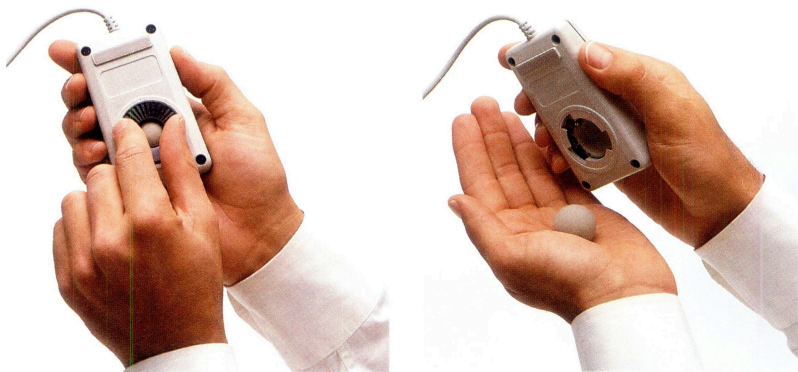
## Mouse

Be careful not to drop the mouse or let it hang from a table by its cable. Just use common sense in treating it as carefully as you can.

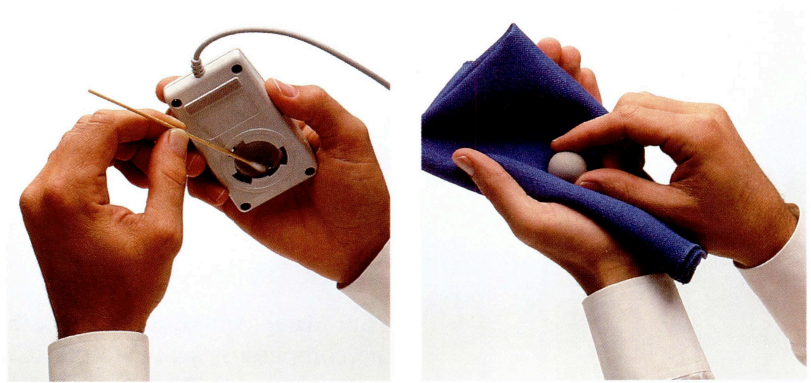
The surface your mouse moves on should be as smooth, clean, and as dust-free as possible. And give the mouse itself an occasional cleaning.

How to clean the mouse:

1. Turn the mouse upside-down and rotate the plastic dial counterclockwise as far as it will go.
2. Holding one hand over the ball and dial to catch them, turn the mouse back right side up. The dial and the ball will drop into your hand.



3. Inside the case are two plastic rollers, similar to those on a tape recorder. Using a cotton swab moistened with alcohol or tape head cleaner, gently wipe off any oil or dust that has collected on the rollers, rotating them to reach all surfaces.
4. Wipe the ball with a soft, clean, dry cloth. (Don't use a tissue or anything that may leave lint, and don't use a cleaning liquid.)



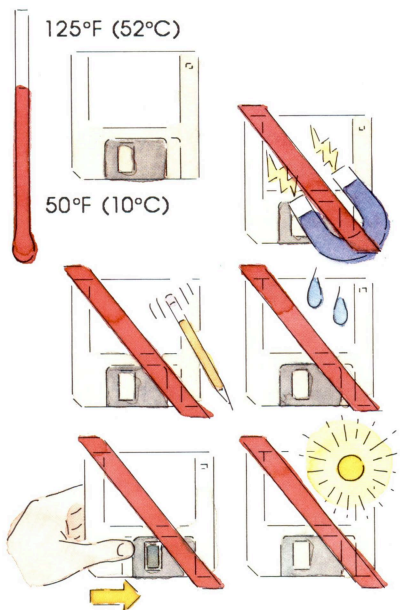
5. Blow gently into the case to remove any dust that has collected there.
6. Put the ball back into its case and, lining up the indicator on the dial with the O on the back of the case, reinsert the dial and turn it clockwise as far as it will go. (It will click when firmly in place.)

## Disks

Although Apple 3.5-inch disks are quite tough, they do have a few modest physical requirements—about the same as audio cassette tapes have. Keep your Macintosh disks dry and away from extreme temperatures. (Don't lay them on top of your Macintosh SE or store them on the seat of your car.) Keep them out of direct sunlight and out of reach of anything that contains a magnet, like a telephone. (Magnetic fields can scramble the information on the disk.)

When the disk is inserted into the disk drive, the metal covering on the disk case slides to the left so the Macintosh SE can get information from and save information on the disk. When the disk is out of the disk drive, the metal covering closes by spring action to protect the disk underneath it. Never touch the exposed disk under the metal covering.

Other than that, you don't have to treat disks especially carefully. You can carry them around in your briefcase or coat pocket or mail them to your aunt in Cooperstown. (Two fit nicely in a business envelope.)





Be sure to make a copy of any disks you can't do without. (See "Copying an Entire Disk" in Chapter 3.) It's no fun losing a report the night before you were going to make final corrections.

You can purchase disks in a package of ten from your authorized Apple dealer.

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## **Clock battery**

Your Macintosh SE has a clock that runs continuously, even when the computer is switched off. (Choose Alarm Clock from the Apple menu to see it.) When the computer's power is off, the clock runs on battery power. The battery is an internal lithium battery with a life expectancy of seven years. If the clock begins to lose accuracy, see your authorized Apple dealer.

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## **Service and support**

To help you get the best performance from your system, Apple Computer, Inc. has established a worldwide network of full-support authorized Apple dealers. If you need answers to technical questions or information about product updates, your authorized Apple dealer can help you. Apple's Technical Support organization backs each dealer and international technical support group via AppleLink™, a state-of-the-art on-line electronic information service, to ensure prompt, reliable assistance.

Your dealer has the latest information on new hardware and software products as well as product updates. If you wish to upgrade your system, your dealer can help you select compatible components.

If your product requires service, your local authorized Apple dealer is trained and ready to support you. Apple provides factory-quality parts and the latest available diagnostic equipment to the more than three thousand authorized Apple service centers throughout the world. Apple guarantees parts and warranty labor. (Regulations in each country determine the length of warranty. Some restrictions may apply, depending on the country of original purchase.)

If for some reason you cannot return to the authorized dealer from whom you purchased your system, go to the nearest service location. For the location nearest you, in the United States, call (800) 538-9696; in Canada, call (800) 268-7796 or (800) 268-7637. For locations in other countries, either call the Apple headquarters in your country or write to

Apple Computer, Inc.  
Attn: Customer Relations  
20525 Mariani Avenue  
Cupertino, California 95014  
USA

Apple also offers service options designed to meet your needs. One of these is the AppleCare® Service Agreement (available in the United States, Canada, and Australia only), which extends full warranty coverage up to three years. Your AppleCare contract will be honored at any participating authorized Apple dealer within the country of purchase—an added benefit if you relocate. Local service means time saved in getting your Apple system back to work.

You can purchase AppleCare at any time, but it's a good idea to purchase it with your system, or at least before your warranty has expired, to avoid an owner-paid inspection.

There are also self-service plans designed to allow large installations to repair their own equipment. Whether you use your computer at home, in the office, or at school, Apple has a low-cost service plan for you. For details, please see your authorized Apple dealer.

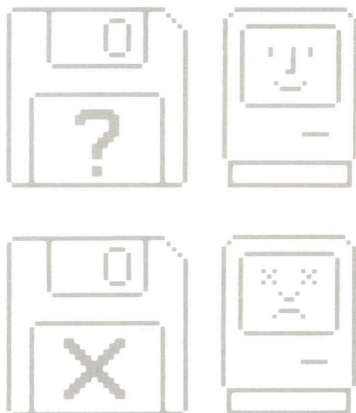
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## Troubleshooting

*Do not attempt to open the cover of your Macintosh SE.* The Macintosh SE was designed to let you add optional equipment—and some devices go inside the computer. But those devices should be installed by an authorized Apple dealer. If your Macintosh SE stops working, try the suggestions given in the table starting on the next page. If it still doesn't work, take it to your authorized Apple dealer or representative.

Problem	What's probably wrong	What to do
The screen is dark.	The Macintosh SE isn't getting power or the brightness control is turned way down.	Check the brightness control under the left side of the screen; turn it clockwise to make the screen brighter. Make sure the Macintosh SE is switched on and the power cord is firmly attached to both the main unit and the wall outlet. If the outlet is controlled by a wall switch, is the wall switch on? Is the outlet controlled by a dimmer switch? (Use a different outlet if it is.)
When you insert a disk, the screen is bright, but the desktop doesn't appear.	When you start up the Macintosh SE or insert a disk, the Macintosh SE presents one of several icons that give you information about itself or the disk you inserted. Each icon gives you information about what's happening.	<p>The question mark means the Macintosh SE is switched on and ready for you to insert a startup disk.</p> <p>The "Happy Macintosh" means everything's fine to this point.</p> <p>An X usually means the disk you inserted to start up the Macintosh SE isn't a startup disk. It can also mean that the disk is damaged. Switch off the Macintosh SE and try restarting with a different disk.</p> <p>The "Sad Macintosh" appears when the Macintosh SE can't go any further because of a problem with the system software. Sometimes this indicates a hardware problem. See your dealer.</p> <p>You may have to eject the disk manually. To do this, press and hold the mouse button while you switch the Macintosh SE off and then on again. (The groaning sound is normal.)</p>





Problem	What's probably wrong	What to do
A dialog box with a bomb icon appears.	There's a serious problem with the software.	The error codes presented in the dialog box are very general and may not be very helpful in discovering the problem. Try restarting the Macintosh SE with the same disk. If the problem occurs again, follow the suggestions in "Miscellaneous Software Problems" at the end of this chapter. If they don't help, you may have to abandon that disk and try a different version of the software.
The computer ejects a disk when you try to start the computer.	There's no System file on the disk. The disk is not a startup disk.	Use a startup disk to start the computer. If necessary, make the disk a startup disk by using the Installer to install a System Folder on the disk. See "Using the Installer" in Chapter 3 for instructions.
The computer won't start, even though the disk is a startup disk.	Some applications will start up only from the internal 3.5-inch drive (the lower drive in two-drive systems).	Insert the disk in the internal 3.5-inch disk drive and try again.
Moving the mouse has no effect on the pointer.	The mouse isn't firmly connected, or the mouse isn't working properly. There may be a problem with the software.	Is the mouse firmly connected? Is it moving on a smooth, clean surface? Does the mouse need cleaning? See "Mouse" earlier in this chapter.  If the problem doesn't seem to be with the mouse, check the software by first restarting the Macintosh SE, then trying another disk. If there seems to be a software problem you can't solve by restarting or by trying another disk, tell your authorized Apple dealer about it.

Problem	What's probably wrong	What to do
Typing on the keyboard produces nothing on the screen.	You might be in a situation that doesn't allow typing. (For example, MacPaint has a tool just for entering text.)	Make sure you're in a situation that allows typing. Use the Key Caps desk accessory to check each key.
	The keyboard connection may be loose, or the keyboard broken.	Make sure the keyboard is connected securely.
	You may have rearranged your Apple DeskTop Bus configuration.	Choose Restart from the Special menu to restart the computer after you've rearranged your keyboard, mouse, and other Apple DeskTop Bus devices.
You can't save anything on a disk.	Either the disk can't accept the information because it is full, not initialized for the Macintosh SE, locked, or damaged, or the disk drive isn't working.	Usually a message appears in a box describing the exact problem. If not, take the following steps. First, try saving the document to another disk. If the other disk accepts the document, there's probably something wrong with the original. Unlock the disk; make sure the tab is covering the window. (If you can't eject the disk in the usual way, see the next section.) Reinsert the disk. Make sure the disk has been initialized for the Macintosh SE.
		If you still have trouble saving anything, the disk drive probably isn't working correctly. Take the Macintosh SE to your authorized Apple dealer for help.
You can't eject the disk.	Your Macintosh SE can't get the information it needs to eject the disk in the usual way.	Hold down the Apple and Shift keys and press 1 to eject a disk from the internal 3.5-inch drive. Hold down the Apple and Shift keys and press 2 or 0 to remove disks from the other 3.5-inch drives. This should eject the disk. As a last resort, find the small hole beside the opening where you insert the disk. Insert a straightened paper clip or similar small object and push. This ejects the disk if all else fails.

Problem	What's probably wrong	What to do
The hard disk's in-use light doesn't blink when you switch on the computer, or the hard disk icon doesn't appear on the desktop.	You haven't initialized the hard disk.	Read Appendix A for instructions on initializing the hard disk.
	Your System file on the hard disk may be damaged.	Use the Disk First Aid™ program on the <i>Utilities</i> disk. See the <i>Macintosh Utilities User's Guide</i> for instructions. (If necessary, hold down the Option, Apple, Shift, and Delete keys while you restart the computer with the <i>Utilities</i> disk. This lets the system skip the disk during the disk-scanning process.) If you still have problems, use the Installer on the <i>System Tools</i> disk to reinstall the SystemFolder. See "Using the Installer" in Chapter 3 for instructions.
	Your hard disk may have been damaged if you turned it off or there was a power failure while the hard disk was in the middle of an operation.	Reinitialize the hard disk. (See Appendix A for instructions.) Use the Installer on the <i>System Tools</i> disk to reinstall the System Folder. See "Using the Installer" in Chapter 3 for instructions.
You are running the initialize program on your hard disk and you see the message "This drive is not working correctly. See your dealer."	There is a hardware problem with the hard disk.	See your dealer.
An application doesn't work correctly on the hard disk.	The application may need to be at the top level of the hard disk's hierarchy (the disk directory window).	Move the application from any folders and try starting it from the hard disk's directory window. If you still have problems using the application, use the application disk as the startup disk. (You may need to use the Installer to update the System files on the startup disk. See "Using the Installer" in Chapter 3 for instructions.)



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## General symptoms and solutions

If none of these specific symptoms or solutions seems to fit, consider the three general ways in which your Macintosh SE could be ailing:

- ☐ The application you're using could have gone wrong just this once as it was being copied from the disk into memory.
- ☐ One of the disks you're using—either the application disk or the data disk—is corrupted in some way.
- ☐ The Macintosh SE is on the blink.

If you've checked the specific symptoms in this chapter and you still can't get your computer to work, try turning it off briefly and then on again. Sometimes the problem corrects itself when the system restarts. If you find yourself in the same dilemma after restarting the Macintosh SE, the problem is with the disk. Try another disk (one without any valuable documents on it, if possible, so you don't risk losing them).

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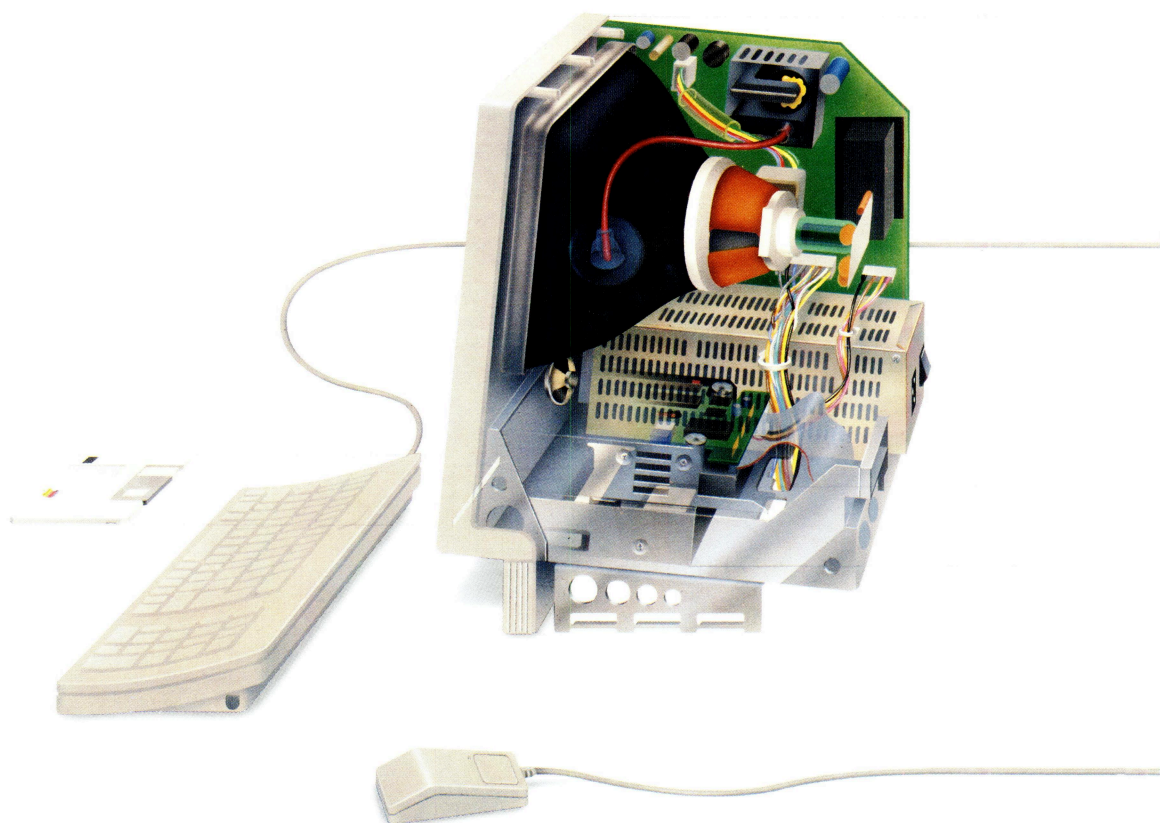
## Miscellaneous software problems

You can avoid many software problems by always keeping each of your startup disks current with the latest system software. See "Using the Installer" in Chapter 3. If you have the same problem with all disks, the Macintosh SE most likely has a problem. Take it to your authorized Apple dealer.

Some applications are fussy about where they are in the hierarchical file system. If you're having trouble with a particular application, move the application and any documents you created with it to the top level of the disk's hierarchy.

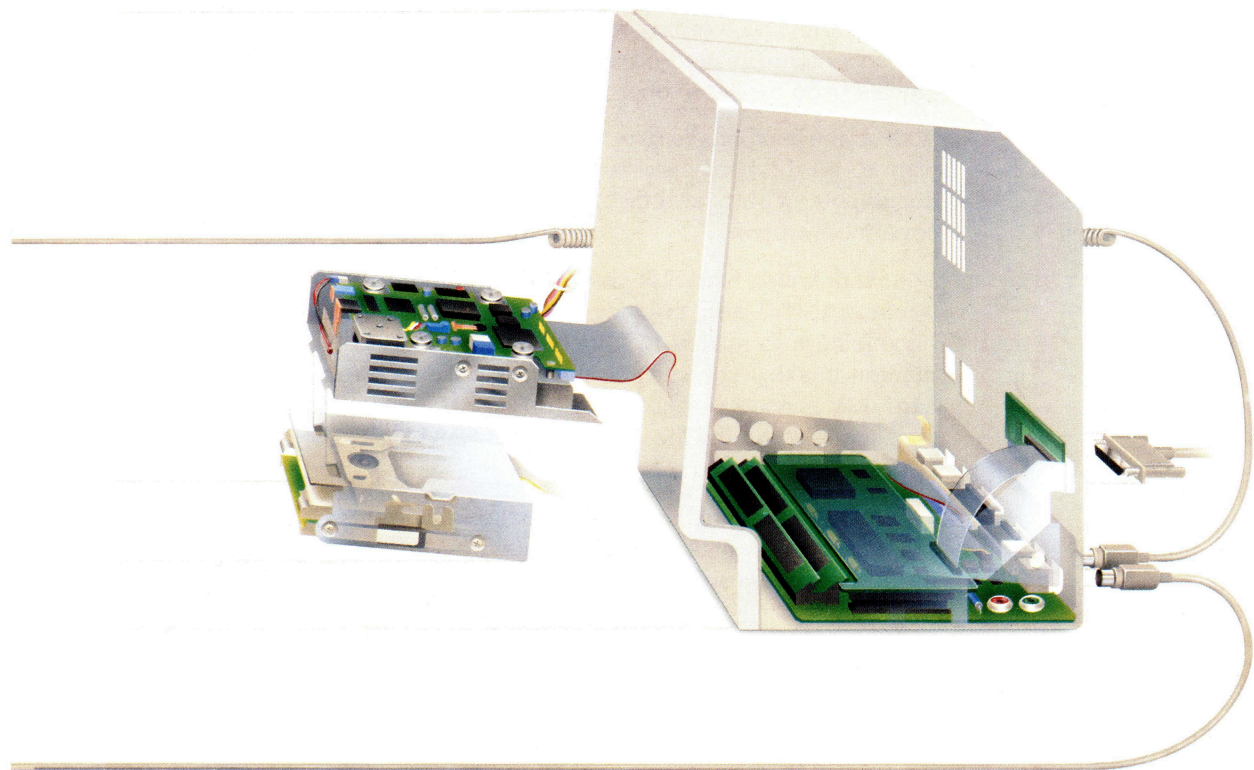
Some applications may require their own customized system files to work properly. In this case, hold down the Option key while you open the application to force the Macintosh SE to switch startup disks. This is especially useful if you're using a hard disk. See "Startup Disks" in Chapter 4.

Some applications use data files, such as help files, which are kept together in a separate folder. If you drag that folder to a disk that's initialized two-sided, the application may not be able to find the data files. Try moving the data files to the same folder as the application. If all else fails, drag the application, documents, any necessary data files, Finder, and System file together to the disk-level directory—not in any folder.





# Appendixes





## Appendix A



# The Internal Hard Disk

A hard disk lets you work more quickly and more efficiently. You work more quickly with a hard disk because a hard disk transfers information to and from your computer's main memory much faster than does a 3.5-inch disk; you don't have to wait for your 3.5-inch disks to catch up with you when you store and retrieve information. You work more efficiently because you can store large amounts of information on a hard disk—about twenty five times as much as you can store on a 3.5-inch disk.

With so much storage space, you can put just about as much as you want to on the hard disk—system files, applications, folders, documents. With a hard disk, your Macintosh SE is almost a self-contained system.

You work with a hard disk and a 3.5-inch disk in the same way: opening a hard disk, copying applications and documents, and organizing information in folders are identical. In fact, the only difference is that you can't eject a hard disk. You can think of the hard disk as an oversized 3.5-inch disk that always stays in its drive. (But see "Getting the Most Out of Your Hard Disk" later in this appendix.)

To prepare your hard disk, you need to initialize it. Then, to make it a startup disk (to make starting your system automatic), you need to install the system software.

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## Initializing the hard disk

Initializing the hard disk prepares the disk to store information and installs the **driver resource**, a file that tells your computer how to work with the hard disk.

❖ *External hard disk drive:* If you have an external hard disk, it may need to be initialized, too. The procedures are similar for both internal and external hard disks, but not always identical. To initialize an external hard disk, follow the instructions in the manual that comes with the external hard disk.

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**Important** Someone else may already have prepared the internal hard disk for you. If so, you probably won't want to initialize the hard disk again. Reinitializing a disk wipes out any information already stored on it.

To see if your hard disk has already been prepared, switch the Macintosh SE on with no disks in other disk drives. If the computer is already on, choose Shut Down from the Special menu and then click the Restart button on the screen after any 3.5-inch disks have been ejected. If the hard disk is already initialized, the In-use light on the front panel will flicker, and in a few seconds you'll see the Macintosh SE desktop. If all you see is a question mark on the screen, go ahead and initialize the hard disk.

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Here's how to initialize the hard disk:

■ **Insert the *System Tools* disk and switch on the Macintosh SE, if it's not already on.**

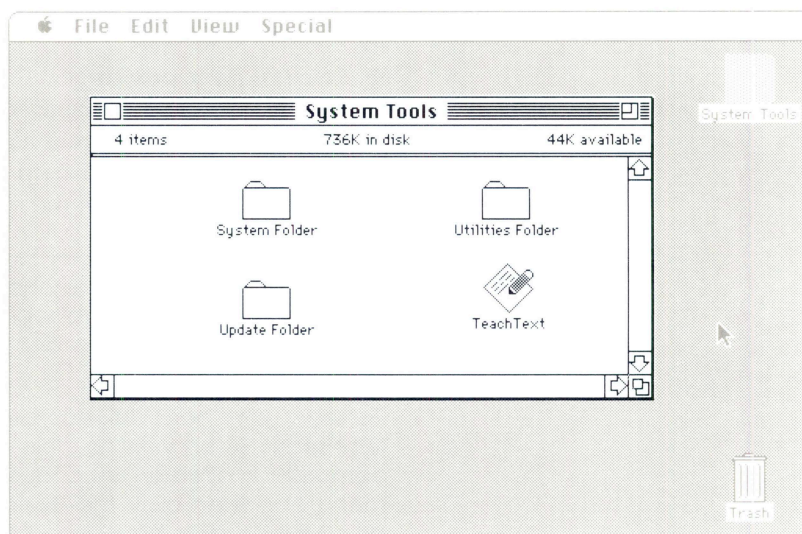
If your computer is already on but you have another disk in the drive, choose Shut Down from the Special menu and remove the ejected disk. Then insert the *System Tools* disk and click the Restart button on the screen.

After a few seconds, you see the disk icon on the Macintosh SE desktop.



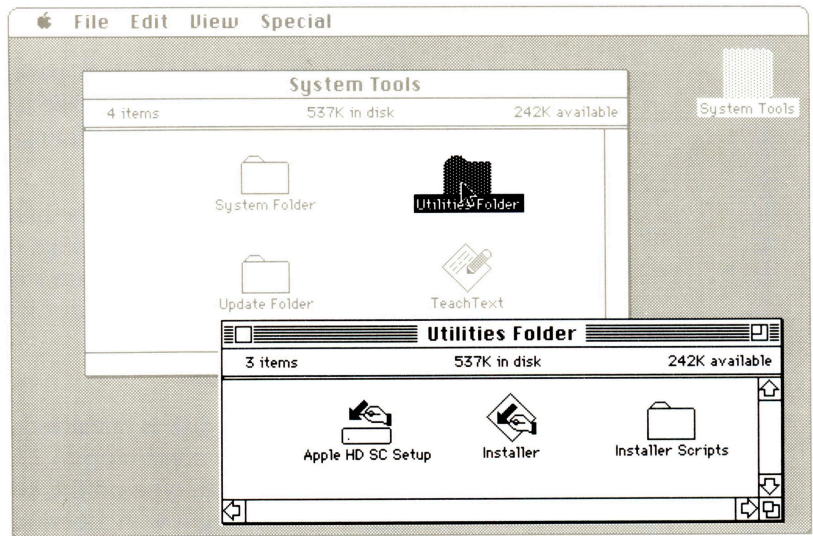
■ **Open the System Tools disk icon.**

In the System Tools disk window, you see the Utilities Folder.



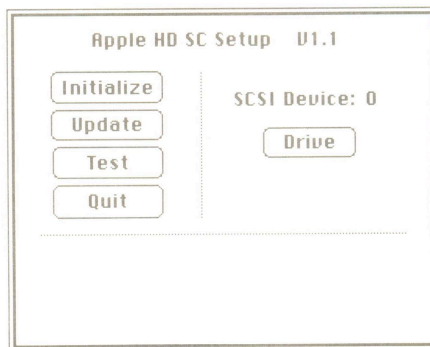
■ **Open the Utilities Folder.**

Among some other icons, you see the icon for the hard disk installer; it's called *Apple HD SC Setup*.



■ **Open the Apple HD SC Setup icon.**

You see the Apple HD SC Setup dialog box, which has five buttons: Initialize, Update, Test, Quit, and Drive.



■ **Click Initialize.**

(You'll read about the other buttons in a moment.) Another dialog box comes up, giving you a chance to change your mind; it warns you that the initialization process erases the whole disk.

#### ■ Click OK.

The in-use light on the front panel starts to flicker, letting you know the hard disk is being initialized. Various messages appear on the screen that explain what's going on in the meantime. Initialization takes about seven minutes.

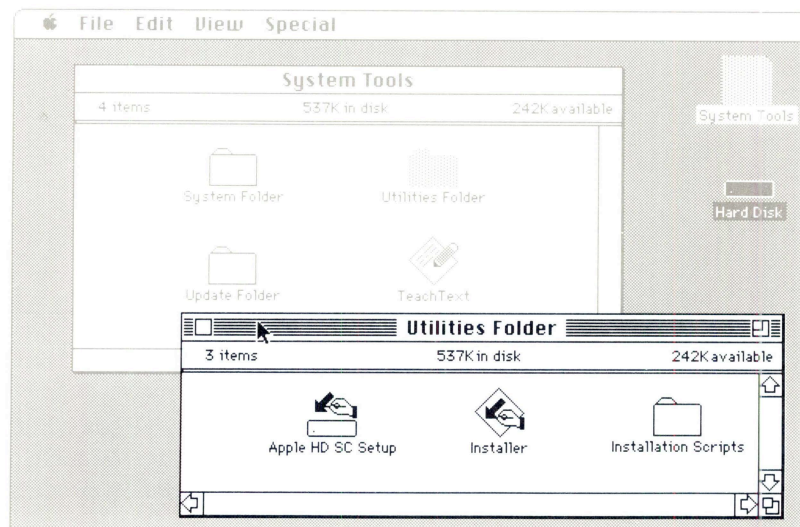
A message tells you when the hard disk has been successfully initialized. If you see a message that the hard disk failed to initialize properly, try again. If you are still unable to initialize the hard disk, turn to “Troubleshooting” in Chapter 6 for help.

#### ■ Name the disk.

After your hard disk is initialized, you are asked to name the disk. Disk names can contain up to 27 characters. You can use any character you can type on the keyboard except a colon (:). The name cannot begin with a period (.). Just type a name and then click OK.

#### ■ Click Quit.

You return to the Finder, which now includes the hard disk icon on the right side of the desktop with the name you've given it.



If you have any trouble initializing the hard disk, use the suggestions in “Troubleshooting” in Chapter 6. If they don’t solve the problem, get help from a more experienced Macintosh user or contact your authorized Apple dealer or representative.

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## Those other buttons

The dialog box that appeared earlier has four other buttons besides Initialize. You already know about the Quit button; the other three—Update, Drive, and Test—let you perform maintenance functions on your hard disk.

### Update

You use the Update button to install updated driver resources. (From time to time, Apple Computer releases improved versions of system software. Your authorized Apple dealer or representative can tell you if an updated driver resource becomes available.) Updating system software on your hard disk lets you get improved performance without any risk to the information already stored on the disk.

You also use this button to reinstall the driver resource if you have certain kinds of problems with the hard disk. (See “Troubleshooting” in Chapter 6.)

### Drive

Use the Drive button to assign a device number for other SCSI devices you want to connect to your system. When you click the Drive button, the SCSI number changes. The number you pick must match the number you set on the device you’re about to initialize. If the only SCSI device you’re using is the internal hard disk, you can ignore this button. (If you must know, the internal hard disk’s SCSI number is 0.) See the manuals that come with your other devices for more instructions on connecting them to your system. See “The SCSI Interface” in Chapter 5 for more information about SCSI devices, and read Appendix C for important instructions on connecting SCSI devices to your system.



## Test

Click the Test button to start a test of your hard disk. The test takes about four minutes, and it checks to make sure your hardware is working properly. (It doesn't check any software, and it has no effect on information you've stored on the disk.)

You can run the test anytime you want. In fact, it makes sense to run this test once a month or so to make sure that everything is working OK. (Sometimes this test can spot a problem before it becomes obvious and before any information is affected.) If your hard disk fails the test, immediately copy any files you haven't backed up yet, stop using the hard disk, and see your authorized Apple dealer or representative for help.

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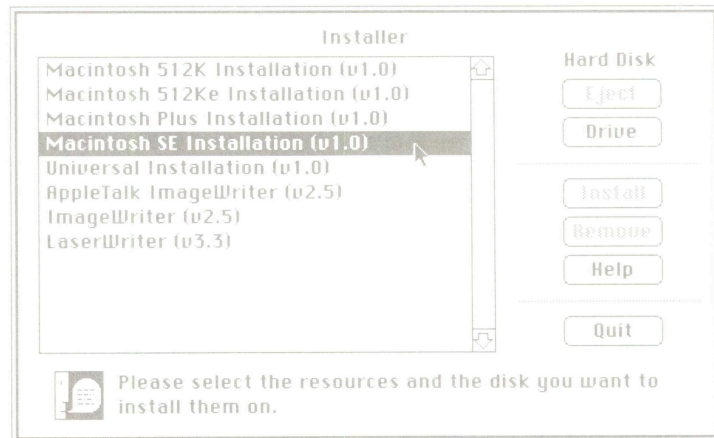
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## Installing system software

Making your hard disk a startup disk lets you start your computer without putting a 3.5-inch disk into the drive. You make your hard disk a startup disk by installing system software on it.

### ■ Open the Installer icon.

A dialog box presents a list of Macintosh systems and printer resources, and some buttons you'll use to install the system software.



■ **Click Macintosh SE Installation.**

You see some messages at the bottom of the dialog box, and then some of the buttons become active.

■ **Click Install.**

You see a message that the System Folder is being installed on the hard disk. Then you see another message that the installation was successful.

If the Installer isn't successful, reinitialize the hard disk and try again. If it's still unsuccessful, contact your authorized Apple dealer or representative.

You can also use the Installer to select any printing resources you want to add to your hard disk's System Folder.

■ **Click the printing resource you want to add.**

■ **Click Install.**

After you've installed the printing resources, you're ready to use the hard disk as a startup disk.

■ **Choose Shut Down from the Special menu.**

■ **Remove the *System Tools* disk and store it in a safe place.**

You'll need this disk again when you test the hard disk or install a new version of the driver resource.

■ **Click the Restart button on the screen.**

The Macintosh SE restarts itself, this time using the hard disk as the startup disk. In a moment, you see the desktop with the hard disk icon on it. Now you can use the hard disk to store your applications, folders, and documents.

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**Important** To take advantage of the speed of the hard disk, your Macintosh SE must use the files in the System Folder on the hard disk to start up. (That's why you just installed the System Folder on the hard disk.) To start up from the hard disk, you must remove any startup disks you have in other disk drives.

Your hard disk is an SCSI device. If you have other SCSI devices attached to your system, you can select the internal hard disk as the startup device by using the Control Panel. See "Using the Control Panel" in Chapter 3 and "Current Startup Disk" in Chapter 4.

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## Getting the most out of your hard disk

While you can approach using your hard disk as though it were just a big 3.5-inch disk, there are certain precautions you should take.

■ **Organize your files carefully.**

Hard disks let you keep large numbers of applications, documents, and other files just a mouse click away. But without careful organizing, you can scatter your files all over the place. Be sure to organize your files into folders in a way that makes your job easy. And if you happen to misfile a document or application, use the Find File desk accessory to help you locate it. (See "Using Find File" in Chapter 3.)

■ **Never shut off your computer while the hard disk's in-use light is blinking.**

The in-use light blinks when the hard disk is moving information around. Shutting the computer off while the hard disk is working can make the hard disk lose information. And sometimes it can damage the disk's directory, making it necessary for you to reinitialize the hard disk (and in the process lose *all* the information on the disk.)

■ **Back up everything.**

Some people back up information stored on their hard disks weekly; more prudent people back up their work everyday. The important thing is to make backup copies regularly. Hard disks are reliable, but accidents do happen. Copy individual documents from the hard disk to 3.5-inch disks just as you would in copying documents from one disk to the other. For backing up large groups of documents, use the HD Backup program on the *Utilities* disk. You'll find instructions in the *Macintosh Utilities User's Guide*.

■ **If you have problems using the hard disk, see "Troubleshooting" in Chapter 6.**

Chapter 6 provides solutions to common problems that you may occasionally experience when using your hard disk. If you have a problem that you still can't fix, see your authorized Apple dealer or representative.





## Appendix B



# Macintosh SE Specifications

Processor:	MC68000, 32-bit internal architecture, 7.8336 MHz clock frequency
Memory:	1MB RAM (expandable to 4MB) 256K ROM 256 bytes of user-settable parameter memory
Disk capacity:	800K on double-sided 3.5-inch disks 20MB on optional internal hard disk
Screen:	9-inch diagonal, high-resolution, 512-pixel by 342-pixel bit-mapped display
Interfaces:	Two Apple DeskTop Bus connectors for communication with keyboard, mouse, and other devices over low-speed, synchronous serial bus  Two RS-232/RS-422 serial ports, 230.4K baud maximum (up to 0.920 megabit per second if clocked externally)  External disk interface  Expansion connector (CPU bus connector) SCSI interface  Sound port for external audio amplifier
Sound generator:	4-voice sound with 8-bit digital-analog conversion using 22 KHz sample rate

Input:	Line voltage: 120/240 volts AC, RMS Frequency: 47-63 Hz single phase Power: 100 watts maximum
Keyboard:	Apple Keyboard
Mouse:	Mechanical tracking, optical shaft encoding 3.54 pulse per mm (90 pulse per inch) of travel
Clock/calendar:	CMOS custom chip with 7-year lithium battery
Fan:	10 CFM cross flow

### Size and weight

	Weight	Height	Width	Depth
<b>Main unit</b>	7.7-9.5 kg* 17-21 lbs.*	345.4 mm 13.6 in	243.8 mm 9.6 in	276.2 mm 10.9 in
<b>Apple Keyboard</b>	1.0 kg 2 lbs. 4 oz.	44.5 mm 1.75 in	418.3 mm 16.5 in	142.0 mm 5.6 in
<b>Mouse</b>	.17 kg 6 oz.	27.9 mm 1.1 in	53.3 mm 2.1 in	96.5 mm 3.8 in










\*Weight varies depending on installed optional hard disk or second 3.5-inch drive.

### Environment

Operating temperature:	0° C to 40° C 50° F to 104° F
Storage temperature:	-40° C to +47° C -40° F to 116.6° F
Relative humidity:	5% to 95% (non-condensing)
Altitude:	0 to 3048 m (0 to 10,000 ft)

# Appendix C

## Macintosh Peripheral Cables

		Macintosh SE (Mini-8) 	Macintosh (DB-9) 
ImageWriter II (Mini-8) 		M0187 Apple System/ Peripheral-8 Cable	M0185 Macintosh Peripheral-8 Cable
ImageWriter (DB-25) 		#699-0372 Macintosh Plus Peripheral Adapter (Use with existing cable)	Use existing cable
Apple Personal Modem (Mini-8) 		M0187 Apple System/ Peripheral-8 Cable	M0185 Macintosh Peripheral-8 Cable
Apple Modem 300/1200 (DB-9) 		#699-0372 Macintosh Plus Peripheral Adapter (Use with existing cable)	Use existing cable
AppleTalk (Mini-8) 		M2052 AppleTalk System Connector Kit	M2010 AppleTalk Connector Kit
		AppleTalk for LaserWriter:	
			(DB-9) M2010 AppleTalk Connector Kit
		AppleTalk for AppleTalk ImageWriter II:	
			(Mini-8) M2052 AppleTalk System Connector Kit

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**Important** The Macintosh SE was FCC-certified under test conditions that include the use of shielded cables and connectors between system components. It is important that you use shielded cables and connectors to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

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## SCSI cables and terminators

Hard disks and other devices connected to the SCSI port on the back of the main unit must have the proper number of terminators for the devices to work correctly and to prevent damage to the SCSI chip inside your computer.

Terminators are sandwich-like devices that fit between an SCSI cable and an SCSI device or between two SCSI connectors. There must be no more than two terminators in an SCSI chain—one at the start of the chain and one at the end.

Knowing when you need and don't need a terminator can be confusing. Sometimes a terminator is inside an SCSI device where you can't see it, as with an Apple internal hard disk. (The manual for a device will tell you if the device has a terminator.) And sometimes the 18-inch cable that you need to connect external devices to the SCSI connector acts like a terminator. Find the situation that applies to you in the following list. In all cases, it's assumed that you're using Apple's 18-inch SCSI System cable to go from your computer to the first SCSI device.

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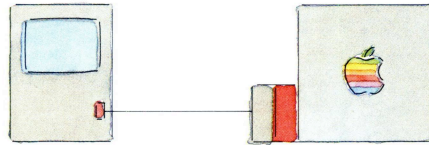
**Warning** *Never* connect an RS-232 device to the SCSI port. Even though the SCSI looks like an RS-232 port, it is not a serial port or a parallel printer interface. Attaching anything other than an SCSI device to the SCSI port can seriously damage your computer.

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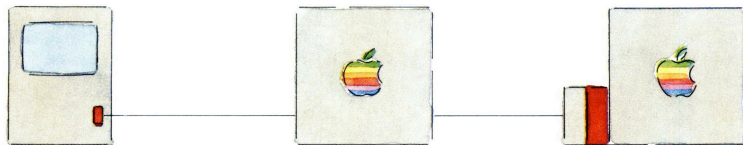
### ■ Internal hard disk to single external Apple device

Add a terminator between the 18-inch cable coming from your computer and the SCSI connector on the Apple external device.



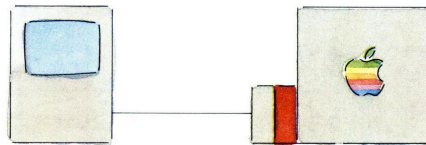
### ■ Internal hard disk to multiple external Apple devices

Add a terminator between the cable and the last device's connector.



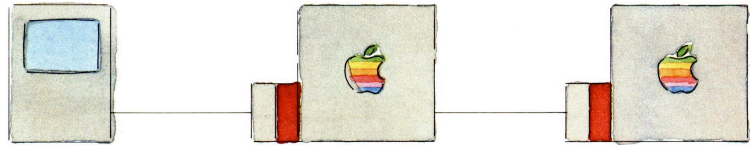
### ■ No internal hard disk to single external Apple device

Add a terminator between the 18-inch cable coming from your computer and the SCSI connector on the Apple external device.



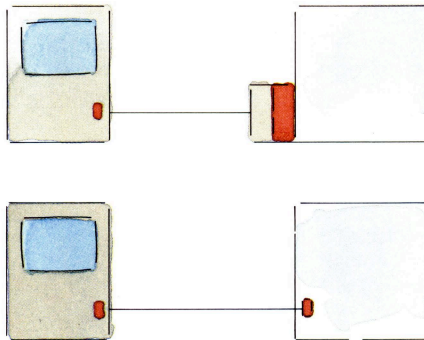
### ■ No internal hard disk to multiple external Apple devices

Add a terminator between the 18-inch cable coming from your computer and the SCSI connector on the first Apple external device, and add a terminator between the cable and the last device's SCSI connector.



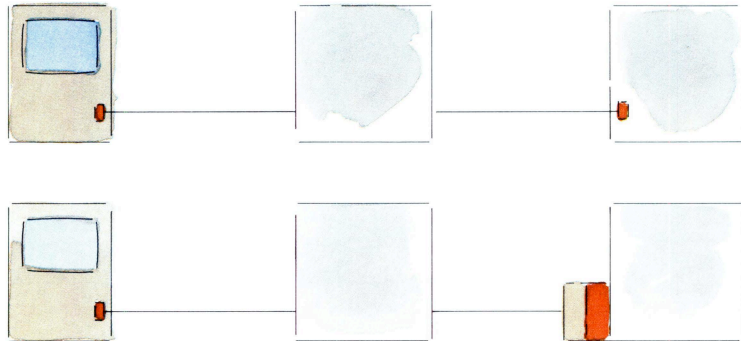
### ■ Internal hard disk to single external non-Apple device

If the external device has no built-in terminator, add a terminator between the connecting cable and the external device's SCSI connector. If the external device has a built-in terminator, you don't need an additional one.



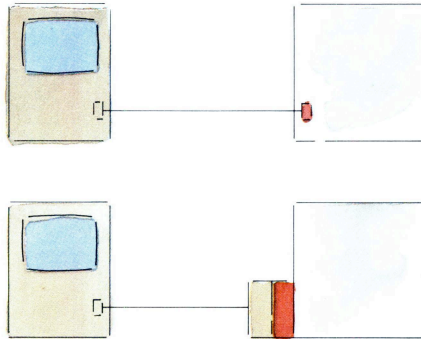
### ■ Internal hard disk to multiple external non-Apple devices

If any of the devices in the chain has its own built-in terminator, move that device to the end of the chain and don't add any terminators. If none has a built-in terminator, add a terminator between the cable and the last device's SCSI connector.



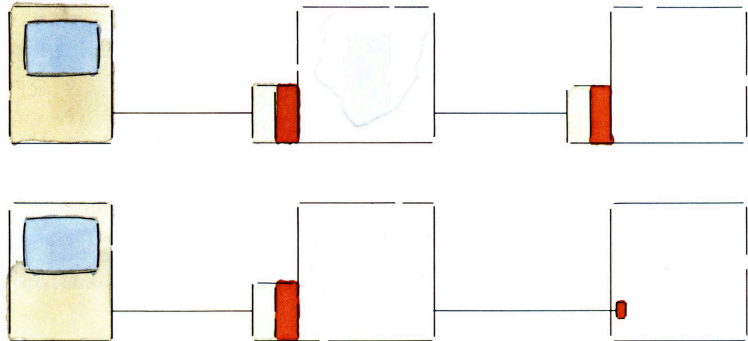
### ■ No internal hard disk to single external non-Apple device

If the external device has an internal terminator, do *not* add a terminator. If the external device does *not* have an internal terminator, add a terminator between the cable and the external device's SCSI connector.



### ■ No internal hard disk to multiple external non-Apple devices

If none of the devices has a built-in terminator, add a terminator between the 18-inch cable and the first non-Apple SCSI device, as well as between the last cable and the last device's SCSI connector. If one of the non-Apple devices in the chain has its own internal terminator, place that device at the end of the chain and eliminate the second terminator.



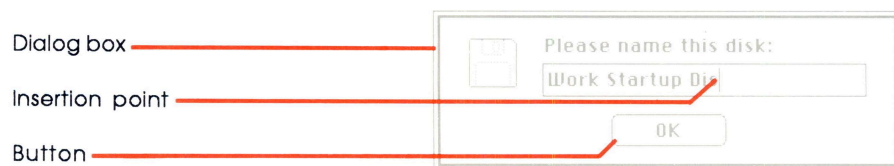
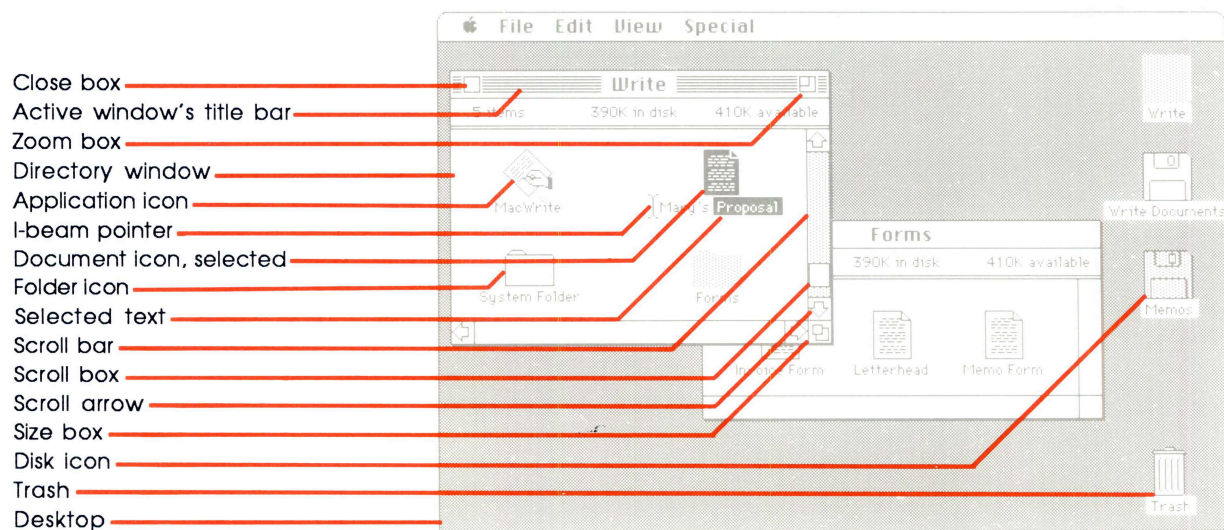
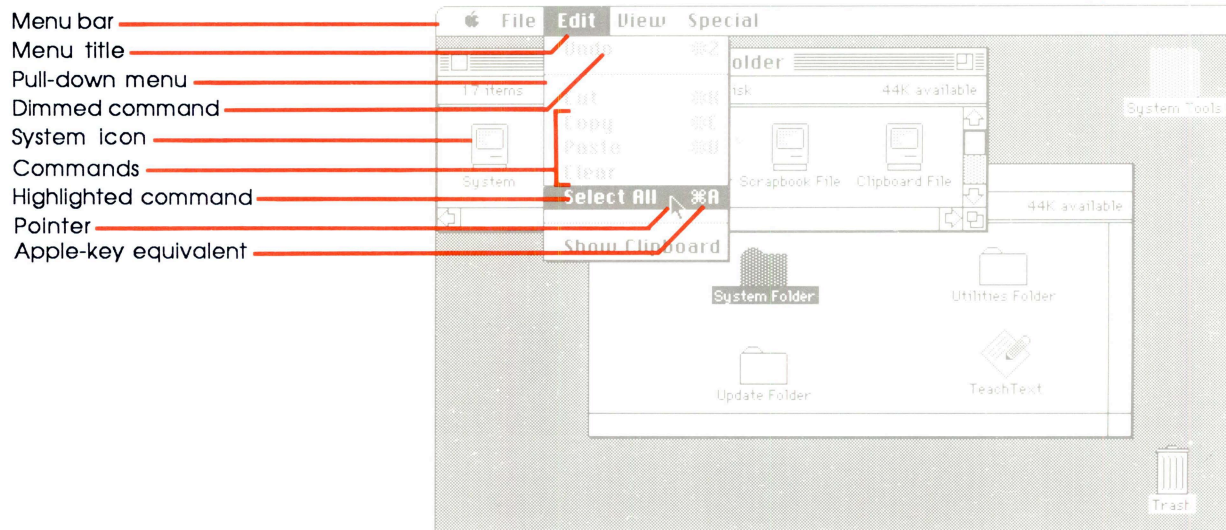
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#### Warning

You can have no more than two terminators in the entire SCSI chain. More than two terminators in the chain may damage your computer. If more than one of the non-Apple devices in the chain has an internal terminator, remove it or have your authorized Apple dealer remove it. Check the manual that comes with the device to be sure.

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# Glossary



**accessory access port:** An insert on the back panel of the main unit that allows access to the expansion connector inside the computer. Used only for cables that run between an **option card** and a **peripheral device**.

**active window:** The frontmost window on the desktop; the window where the next action will take place. An active window's title bar is highlighted.

**Alarm Clock:** A desk accessory that displays the current date and time and lets you set an alarm.

**alert box:** A box that contains a warning that you're asking the Macintosh SE to do something it can't do, or that you're about to destroy some information. The warning is accompanied by a beep.

**Apple DeskTop Bus:** The set of connectors on the back panel of the computer that you use to attach the keyboard, mouse, and other Apple DeskTop Bus devices, such as graphics tablets, hand controls, and specialized keyboards.



**Apple key:** A key that, when held down while another key is pressed or a mouse action is performed, causes a command to take effect. So called because of the Apple icon on the key. (It's sometimes called the *Command* key.)

**Apple menu:** The menu on the far left in the menu bar. Its title is an apple symbol.

**application program:** A tool to manipulate information, sometimes called an *application*.

**bridge:** A device that lets you connect AppleTalk networks together. See **zone**.

**button:** A place in a dialog box where you click to designate, confirm, or cancel an action. See also **mouse button**.

**Calculator:** A desk accessory that works like a four-function pocket calculator. You can cut and paste calculation results into your documents.



**Cancel button:** A button that appears in dialog boxes. Clicking this button cancels the command.



**Caps Lock key :** A key that, when engaged, causes subsequently typed letters to appear in uppercase. It works like a Shift key except that it doesn't affect numbers or symbols.

**character keys:** The following keys on the Macintosh SE keyboard: letters, numbers, symbols, punctuation, Return, Tab, and the space bar.

**check box:** The small box or circle associated with an option in a dialog box that, when clicked, adds or removes the option.

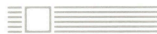
**choose:** To pick a command from a menu by dragging. Usually you do this after you've selected something for the Macintosh to act on.

**Chooser:** A desk accessory that lets you configure your Macintosh SE system to print on any printer for which there's a printing resource on the current startup disk. If you're part of an AppleTalk network, you use the Chooser to connect and disconnect from the network and choose among devices connected to the network. You can also specify a user name that the Macintosh SE uses from time to time, when you're printing on a LaserWriter, for example.

**click:** To position the pointer on something, then press and quickly release the mouse button.

**Clipboard:** The holding place for what you last cut or copied.

**close:** To turn a window back into the icon that represents it.



**close box:** The small white box on the far left side in the title bar of an active window. Clicking a close box closes the window.

**command:** A word or phrase, usually in a menu, describing an action for the Macintosh SE to perform.



**Control key:** A key whose function varies depending on the application you're using.



**Control Panel:** A desk accessory that you use to personalize your computer to your own way of doing things. Use the Control Panel to change the speaker volume, set the system clock, create a RAM cache, and set other preferences.

**copy protect:** To make copying a disk impossible. Software publishers frequently try to copy protect their disks to prevent them from being illegally duplicated by software pirates.

**current startup disk:** The **startup disk** whose system files the Macintosh SE is currently using.

**cut:** To remove something by selecting it and choosing Cut from the Edit menu. What you cut is placed on the Clipboard.

**daisy-chain:** To link together sequentially.



**Delete key:** A key that moves the insertion point backward, removing the previously typed character, or that removes the current selection.

**desk accessories:** “Mini-applications” that are available on the desktop from the Apple menu regardless of which application you’re using. Examples are the Calculator, Alarm Clock, and Scrapbook.

**desktop:** The Macintosh computer’s working environment: the menu bar and the gray area on the screen.



**dialog box:** A box that contains a message requesting more information from you. Sometimes the message is a warning that you’re asking your Macintosh SE to do something it can’t do or that you’re about to destroy information. In these cases the message is often accompanied by a beep. See also **alert box**.



**dimmed command:** A command that appears dimmed compared to other commands in the menu. You can’t choose a dimmed command.

**dimmed icon:** An icon that represents a disk that has been ejected, or a document, folder, or application on a disk that has been ejected. You can select and open dimmed disk or folder icons, but you can’t open the documents and applications on them.

**directory:** A list of the contents of a disk. The contents can be listed pictorially, alphabetically, chronologically, by size, by date, or by kind.

**directory window:** The window that shows you the contents of a disk or folder.





**disk:** The magnetic medium on which the computer stores information. Your computer can use a 3.5-inch disk or a hard disk.



**disk drive:** The mechanism that holds the disk, retrieves information from it, and saves information on it. A hard disk drive has the disk permanently encased. A 3.5-inch disk drive requires that you insert a 3.5-inch disk.



**document:** Whatever you create with Macintosh applications—information you enter, modify, view, or save.

**double-click:** To position the pointer where you want an action to take place, and then press and release the mouse button twice in quick succession without moving the mouse. A technique used in selecting and opening.

**drag:** To position the pointer on something, press and hold the mouse button, move the mouse and release the mouse button. When you release the mouse button, you either confirm a selection or move an object to a new location. A technique used in choosing commands, selecting text, and moving icons.

**driver resource:** A file in a System Folder that tells the computer how to work with a device.



**Enter key:** A key that confirms or terminates an entry or sometimes a command.



**Esc key:** A key whose function varies depending on the application you're using.

**expansion connector:** A connector inside the Macintosh SE that lets you install an **option card** to enhance the computer's performance.

**file:** A collection of information stored on a disk—a document, a system file such as the System file or Finder, an application, and so on.

**Finder:** An application that's always available on the desktop. You use it to manage documents and applications and to get information to and from disks.



**folder:** A holder of documents, applications, or other folders on the desktop. Folders allow you to organize information in any way you want.

**font:** A collection of letters, numbers, punctuation marks, and other typographical symbols with a consistent appearance. Geneva is an example of a Macintosh font.

**hard disk:** A **disk drive** with a permanently encased disk.

**hardware:** The physical parts of the computer system. Any part of the Macintosh SE that you can touch.

**hierarchical file system:** The feature that lets you use folders to organize documents, applications, and other folders on a disk. Folders (analogous to subdirectories in other systems) can be nested in other folders to create as many levels in a hierarchy as you need. Opening a folder presents only the information you've put in that folder, so you can concentrate on that information without viewing everything on the disk.

**highlight:** To make something visually distinct from its background, usually to show that it has been selected or chosen.

**hollow icon:** An icon that represents an opened disk or folder.



**I-beam:** A type of pointer used in entering and editing text.

**icon:** A graphic representation of an object, a concept, or a message.

**information window:** The window that appears when you select an icon, document, application, or folder and choose Get Info from the File menu. It supplies information such as size, type, and date, and it includes a place for adding notes.

**initialize:** To prepare a disk to receive information.

**insertion point:** The spot in a document where something will be added. You select an insertion point by clicking. It's represented by a blinking vertical bar.

**interface:** Hardware or software that links the computer to a device.

**lever:** The little arm that appears when you choose the Alarm Clock desk accessory. When you click the lever, two panels appear that let you set the time, date, and the alarm.

**local area network:** A group of computers linked physically by a network of communications cables.

**lock:** To prevent documents from being edited, discarded, or renamed, or to prevent entire disks from being altered.

**main unit:** The computer console, which contains the processor, memory, the built-in disk drive(s), the optional internal hard disk, and the screen.

**megabyte (MB):** A unit of measurement equal to 1024 kilobytes.

**memory:** The place in the computer's main unit that stores information. The Macintosh SE includes 1 megabyte of memory you can use for your work, and 256K of ROM (read-only memory) that stores certain system information permanently. See also **RAM** and **ROM**.

**menu:** A list of commands that appears when you point to and press the menu title in the menu bar.

**menu bar:** The horizontal strip at the top of the screen that contains menu titles.

**menu title:** A word or phrase in the menu bar that designates one menu. Pressing on the menu title causes the title to be highlighted and its menu to appear below it.



**mouse:** The small device you roll around on a flat surface next to your computer. When you move the mouse, the pointer on the screen moves correspondingly.

**mouse button:** The button on the top of the mouse. In general, pressing the mouse button initiates an action on whatever is under the pointer, and releasing the button confirms the action.

**nesting:** Placing folders inside other folders. See **hierarchical file system**.

**numeric keys:** Keys on the right of the keyboard that let you enter numbers and perform calculations quickly.

**open:** To create a window from an icon so you can view a document or directory.

**option card:** A card that contains electronic circuits that implement specialized functions. Option cards are installed by your authorized Apple dealer in the **expansion connector** inside the computer. Some examples are coprocessors and accelerators.



**Option key:** A key used to give an alternate interpretation to another key you type. You use it to type foreign characters or special symbols.

**paste:** To put a copy of the contents of the Clipboard—whatever was last cut or copied—at the insertion point.

**peripheral device:** A piece of computer hardware—such as a disk drive, printer, or modem—used in conjunction with a computer and under the computer's control. Peripheral devices are usually physically separate from the computer and connected to it by wires or cables.



**pointer:** A small shape on the screen, most often an arrow pointing up and to the left, that follows the movement of the mouse.

**port:** A socket on the back panel of the computer where you can plug in a cable to connect a peripheral device, another computer, or a network.

**press:** To position the pointer on something and then hold down the mouse button without moving the mouse.

**printing resource:** A system file that lets you print on a corresponding printer attached to the Macintosh SE. Sometimes called a *printer driver*.

**RAM:** An acronym for *random-access memory*, the part of the Macintosh SE memory that stores information temporarily while you're working on it. RAM can contain both application programs and your own information. Information in RAM is temporary and is gone forever if you switch the power off. An exception to this is a small amount of memory used to save settings, such as the clock and the speaker volume, which is powered by battery when your Macintosh SE is switched off. See also **ROM**.

**RAM cache:** RAM you can designate to store certain information an application uses repeatedly. Using the RAM cache can greatly speed up your work, but may need to be used sparingly or not at all with applications that require large amounts of memory. You set the RAM cache in the Control Panel.

**Read Me documents:** Documents that are included on application and system software disks that provide you with late-breaking information about the product. You'll usually find Read Me documents in the Update Folder on the disk.



**Reset key:** A key whose function varies depending on the application you're using.



**Return key:** A key that makes the insertion point move to the beginning of the next line. It's sometimes used to confirm or terminate an entry or a command.

**ROM:** An acronym for *read-only memory*, the part of memory that contains information the computer uses (along with system files) throughout the system, including the information it needs to get itself started. Information in ROM is permanent; it doesn't vanish when you switch the power off. The Macintosh SE contains 256K of ROM. See also **RAM**.

**save:** To store information on a disk.



**Scrapbook:** A desk accessory in which you save frequently used pictures and text.

**scroll:** To move a document or directory in its window so that you can see a different part of it. You can also scroll the directory in some dialog boxes.



**scroll arrow:** An arrow on either end of a scroll bar. Clicking a scroll arrow moves the document or directory one line. Pressing a scroll arrow scrolls the document continuously.

**scroll bar:** A rectangular bar that may be along the right or bottom of a window. Clicking or dragging in the scroll bar causes the view of the document to change.



**scroll box:** The white box in a scroll bar. The position of the scroll box in the scroll bar indicates the position of what's in the window relative to the entire document.

**SCSI:** An abbreviation for *Small Computer System Interface*, an industry standard interface that provides high-speed access to peripheral devices.

**SCSI port:** The port on the back panel of the computer that you connect **SCSI** devices to.

**select:** To designate where the next action will take place. To select, you click or drag across information.

**selection:** The information affected by the next command. The selection is usually highlighted. (The insertion point is also a selection.)

**serial interface:** An interface in which information is transmitted sequentially, a bit at a time, over a single wire or channel.

**serial port:** The connector on the back panel of the computer for devices that use a **serial interface**.

**Shift-click:** A technique that lets you extend or shorten a selection by holding down the Shift key while you select (or deselect) something related to the current selection.



**Shift key:** A key that, when pressed, causes subsequently typed letters to appear in uppercase and causes the upper symbol to appear when number or symbol keys are typed.



**size box:** A box in the bottom-right corner of most active windows that lets you resize the window.

**software:** Programs, or instructions for the computer to carry out. The computer reads these instructions from disks inserted into the disk drive or from a hard disk.

**startup disk:** A disk that contains the system files the computer needs to get itself started. A startup disk must have at least a Finder and a System file. It may also contain files such as printing resources, Scrapbook, and Clipboard.

**style:** A stylistic variation of a font, such as italic, underline, shadow, or outline.

**System file:** A file the computer uses to start itself up or to provide system-wide information. Although system files are represented by icons, they can't be opened in the usual way. You can, however, alter the contents of system files.

**system software:** The files and resources in the System Folder that the computer uses to run itself.

**System Tools disk:** A disk that comes packed with the Macintosh SE. The *System Tools* disk contains important utilities and resources that you can use to maintain and update your computer system and application disks.



**Tab key:** A key that, when pressed, moves the insertion point to the next tab marker or, in a dialog box with more than one place to enter information, to the next text box.

**TeachText:** An application on the *System Tools* disk that lets you read **Read Me documents**.

**text box:** The place or places in any dialog box where you can type information.

**title bar:** The horizontal bar at the top of a window that shows the name of the window's contents and lets you move the window.



**Trash:** An icon on the desktop that you use to discard documents, folders, and applications.

**Update Folder:** A folder on the *System Tools* disk, and on other application and system disks, that contains **Read Me documents**.

**user group:** A computer club where computer users exchange tips and information, usually about a particular brand of computer.

**Utilities disk:** A disk that comes packed with the Macintosh SE. The *Utilities* disk contains important utilities that you can use to maintain your computer system and application disks. The utilities on the *Utilities* disk are explained in the *Macintosh Utilities User's Guide*.

**utility program:** A special-purpose application that alters a system file or lets you perform some useful function on your files. Examples are the Font/DA Mover and the Installer.

**window:** The area that displays information on the desktop. You view documents through a window. You can open or close a window, move it around on the desktop, and sometimes change its size, edit its contents, and scroll through it.

**word wraparound:** The automatic continuation of text from the end of one line to the beginning of the next. Word wraparound lets you avoid pressing the Return key at the end of each line as you type.

**wristwatch:** The pointer's icon that you see on the screen when the computer is performing an action that causes you to wait.



**zoom box:** The small box on the right side of the title bar of some windows. Clicking the zoom box expands a window to its maximum size. Clicking it again returns the window to its original size.

**zone:** A network in a series of interconnected networks, joined through **bridges**.



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## **Tell Apple About Your** .....

- ☐ Please contact your authorized Apple dealer when you have questions about your Apple products. Dealers are trained by Apple Computer and are given the resources to handle service and support for all Apple products. If you need the name of an authorized Apple dealer in your area, call toll-free: 800-538-9696.
  - ☐ Would you like to tell Apple what you think about this product? After you have had an opportunity to use this product we would like to hear from you. You can help us to improve our products by responding to the questionnaire below and marking the appropriate boxes on the card at the right with a **#2 lead pencil**. If you have more than one response to a question, mark all the boxes that apply. Please detach the card and mail it to Apple. Include additional pages of comments if you wish.
1. How would you rate the Macintosh SE overall? (**1**=poor. . . **6**=excellent)
  2. Would you recommend purchasing a Macintosh SE to others? (**1**=no, **2**=yes)
  3. Where did you purchase your Macintosh SE? (**1**=dealer, **2**=Corporate Buy, **3**=Teacher Buy, **4**=department store, **5**=university, **6**=Government Buy, **7**=Certified Developer Program, **8**=other)
  4. Did you own an Apple computer before buying your new Macintosh SE? (**1**=no, **2**=yes)
  5. How much experience have you had with computers? (**1**=none. . . **6**=extensive)
  6. Where is your Macintosh SE used most often? (**1**=work, **2**=home, **3**=school, **4**=other)
  7. Did you purchase software at the same time you purchased your Macintosh SE? (**1**=no, **2**=yes)
  8. What software applications will you use most often with your Macintosh SE? (**1**=word processor, **2**=spreadsheet, **3**=data base, **4**=communications, **5**=business graphics, **6**=education, **7**=art, **8**=games, **9**=other)
  9. What storage devices do you use with your Macintosh SE? (**1**=Apple internal hard disk, **2**=non-Apple internal hard disk, **3**=second internal 800K drive, **4**=Apple external hard disk, **5**=non-Apple external hard disk, **6**=external 3.5-inch disk, **7**=shared mass storage)
  10. What printer do you use with your Macintosh SE? (**1**=LaserWriter, **2**=ImageWriter II, **3**=ImageWriter, **4**=other dot matrix printer, **5**=non-Apple daisy wheel printer, **6**=non-Apple laser printer, **7**=other)
  11. What type of expansion card is installed in your Macintosh SE? (**1**=communications or network, **2**=performance accelerator, **3**=external video adapter, **4**=other, **5**=none)
  12. Which other devices do you use with your Macintosh SE? (**1**=modem, **2**=scanner, **3**=graphics tablet, **4**=other Apple DeskTop Bus input device, **5**=other)
  13. How easy was your computer to set up? (**1**=difficult. . . **6**=very easy)
  14. Did you use the *Macintosh SE* owner's guide to help you set up? (**1**=no, **2**=yes)
  15. How would you rate the product training materials? (**1**=poor. . . **6**=excellent)
  16. How would you rate the *Macintosh SE* owner's guide overall? (**1**=poor. . . **6**=excellent)
  17. How easy was the guide to read and understand? (**1**=difficult. . . **6**=very easy)
  18. Which part of the guide do you use the most? (**1**=Learning Macintosh Basics, **2**=Step by Step, **3**=Reference, **4**=Expanding Your Macintosh SE, **5**=Caring for Your Macintosh SE, **6**=appendixes, **7**=glossary, **8**=index)
  19. Please describe any errors or inconsistencies you may have encountered with the materials. (Page numbers would be helpful.)
  20. What suggestions do you have for improving the Macintosh SE?

Thanks for your time and effort.

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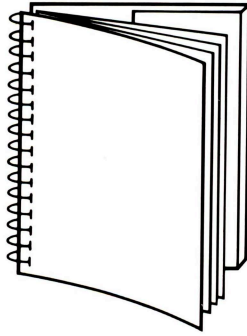


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